

The Week

HOME 1-5
Polytechnic redundancy scheme stalemate
Trent row over censorship by local authority
Keep the SSRC, Rothschild told

NORTH AMERICA
Rengan clashes with academics over security clampdown
Scientists unenthusiastic about 1983 budget proposals
State officials say student aid proposals are too tough

OVERSEAS 7, 10
Five new universities to be established in Turkey
Bir Zeit students play prominent part in West Bank clashes
Australian support for research "a disaster"
Italians flock to study abroad
Portugal's Military Academy in a democratic state

ARTICLES 8-9, 11-12
Social science in crisis: Paul Flather looks at the record of the SSRC, 8
After Chilver: Ngalo Crequer, John O'Leary, and David Jobbins discuss the background to the proposed merger, 9
John Corner discusses the contrast between "high" and "low" art and the challenge this presents, 11
Laurence Kitchin recalls New York's "open admissions" experiment; and William Phillips looks at *Paritsan Review*, 12

BOOKS 13-18
J. R. Watson reviews five new books on aspects of Ruskin, 13
Keith Norris discusses unemployment (14), Ben Pimlott reviews *The Battle for the Labour Party* (15), Michael Riff looks at anti-semitism (16), G. H. Bantock reviews the final volume of James Boyen's history of Western education (17), and D. Z. Phillips reviews Kolokovsk's *Religion* (18)

SCIENCE BOOKS 19-21
Megathic science, nerves and muscles, German engineers and meteorites are among the subjects of new science books

NOTICEBOARD 22

MANAGEMENT 23-29
R. J. Ball, Thomas Kempner, and Ray Wild are among the contributors to a special report on management education in the 1980s

CLASSIFIED INDEX 30

OPINION 34-36

Patrick Nuttgens reflects on the opening of the flat racing season; Keith Hampson MP argues for a return to strict vocationalism in further education; and Don's Diary from Michael Spencer of the University of Queensland, 34
Letters on research, university museums, and University College London; and Jean Boock and Derek Batts of Natthe look at the implications of Chilver in "Union View", 35

Next Week

Peter Winch on G. E. M. Anscombe
The social cost of student cutbacks
Jean Welsgerber on quotation
Social sciences research: the international perspective

© TIMES NEWSPAPERS LIMITED, 1982
Published by Times Newspapers, 20, Gray's Inn Road, London WC1X 8AZ. Registered in England. Printed by Computer Press, 27, Longwalk Road, London E15 4BT. Printed by Computer Press, 27, Longwalk Road, London E15 4BT. Printed by Computer Press, 27, Longwalk Road, London E15 4BT. Printed by Computer Press, 27, Longwalk Road, London E15 4BT.



HIGHER EDUCATION SUPPLEMENT
200 Gray's Inn Road, London WC1X 8AZ. Telephone 01-837 1234

Science or engineering?

The suspiciously cosmetic addition of the words "and engineering" to the title of the Science and Engineering Research Council has not been sufficient to reassure the engineering professors that there has been a genuine change of heart at the council. They still suspect that the theoretical preoccupations of natural scientists receive more than their fair share of attention when the priorities of the SERC are decided while the practical preoccupations of engineers are, relatively, ignored. So they are determined to continue with their campaign to establish an agency to promote research in engineering substantially or entirely independent from the council.

The force of this campaign is easy to understand. It is widely believed, by Sir Keith Joseph and Mr Tony Benn and at all points on the political spectrum in between, that the British educational system, including the universities, does not place sufficient emphasis on practical and relevant subjects like engineering, and that this is an important reason for Britain's disappointing economic performance. It has become almost a truism to say that Britain educates too many Nobel Prize winners and designs too few colour television sets.

The substance of this campaign by the engineering professors, however, is less easy to understand. To the non-partisan observer it appears that the SERC has placed more and more emphasis over the past ten years on engineering and technology and correspondingly less on fundamental science. Certainly the council has not shrunk from the painful task of reducing its over-commitment to high-

energy physics or to astronomy. Nor has it been slow to build up a substantial and sometimes a decisive stake in new areas like micro- and biotechnology.

Indeed some would go further and argue that the SERC was in danger of overtopping the balance and of devaluing fundamental science in a way that could undermine, in the medium- and long-term, the nation's technological capacity as well. They would add that Britain's enviable record of Nobel prizes was a record of past scientific excellence and that today rather little fundamental scientific research was being undertaken in Britain by international standards.

This is an argument that must be listened to with great respect by all those who are not content that Britain should become a technological colony of an American or European research effort to which we might only be impoverished contributors. The relationship between good science and good technology cannot, of course, be assumed to be entirely symbiotic. But nor is it wise to place too much emphasis on the perhaps naive dichotomy between excellence in fundamental science and success in engineering. The example of Japan with its ruthless development and exploitation of other nations' discoveries is not one that can easily or perhaps ever be followed.

There is the further point that if the Rothschild customer-contractor principle means anything at all it should mean that priorities within applied science should be guided by the market and not by an academic agency. There is, of course, a considerable grey area between market choice and scientific preoccupation where the

SERC should operate freely and widely along with private industry and the Department of Industry. But this already happens to a great extent and seems likely to become an even more important part of the work of the SERC.

None of this means that the complaints of the engineering professors about the inadequacy of engineering research are not justified. But it does suggest that the SERC is very much a secondary target. The council, after all, is an agency established to support scientific research that industry will not support because it seems too remote from commercial development and the universities cannot support because their resources are too slender. The council must also continue to support and encourage that fundamental research on which future technology will be built. Within these constraints the SERC has moved a long way since 1973 to meet the complaints of the engineering professors and others that engineering research is not adequately supported.

As with Finniston and the supply of engineers, the real difficulty lies with a set of tangled attitudes in industry and government, administrative or managerial, political or commercial, that arise from Britain's antipathy to entrepreneurial elite culture. The engineering professors are right to argue that a higher priority should be attached to engineering research and they are right to suggest that new institutions must be built to underpin this higher priority. But it is within the empires of the Department of Industry or of the high-technology multinationals rather than the more modest suburbs of the SERC that these institutions should be built.

Retreat from full-cost fees

Ministers, quite understandably, do not tend to crow about changes which they know may provoke unease among their backbench colleagues. Perhaps for this reason, new fee levels for overseas students have been allowed to slip through almost unnoticed, in contrast to previous years. Although the setting of minimum rather than compulsory fee levels, will confuse the situation, last month's announcement should prove to be better news than of late for overseas students. The Government appears to have gone some small way towards relaxing its rigid insistence on supposedly full-cost fees for all students from outside the EEC nations.

Sir Keith Joseph's announcement contained three new departures from the policy adopted by his predecessor. Firstly, local authorities were given the freedom already accorded to universities to charge as much as they wish for courses above a set minimum. Although the Council of Local

Education Authorities has stated that it does not want the minima to become norms, it is likely that they will be treated as such in most parts of the country.

The second, more significant change, is the scrapping of the distinction between undergraduate courses in the public sector and the sharp narrowing of differentials in universities. The effect of this move will be to make science courses very much more affordable where fees are pitched on or near the minimum levels allowed. Some, like the University of Manchester Institute of Science and Technology, will be able even to reduce fees as a result, while others will introduce a freeze.

The third change is an unspoken one arising from the new science minima. For, although the phrase "necessary to meet the cost" remains in the advice to institutions, the setting of minima for science on a per-

with this year's figures indicates a willingness to accept less. Either this year's figures represented deliberate profiteering (though some universities judge them uneconomically low) or the Government is tacitly accepting a new basis of calculating costs or even a return to subsidy.

To some extent, a moderate settlement was forced upon ministers by their decision to halve home students' fees, with the side-effect of widening yet further the gap between EEC students. In the most extreme case, a Spanish student will be paying £480 for a medical course, while a colleague from Gibraltar pays £6,600. It is to be hoped that the Overseas Students Trust's examination of alternative policies, which should be with the Government next month, will find ways to make radical reforms. Next year's fee structure, while falling well short of that, should pave the way to real improvements.

Blockage at 16 plus

There can be little doubt that the upper secondary school is the most troubled sector of our system of education. It contains a bundle of problems: the inability of secondary schools to provide an attractive curriculum for the less able, the perennial failure to establish a common 16 plus examination; the continued domination of sixth form study by overacademic and over-specialized A-levels; the growing discomfiture of school sixth forms and the corresponding attraction of alternative forms of organization like sixth form and tertiary colleges. The failure to make much progress towards the solution of these problems adds up to the most serious blockage in British education today.

The most surprising aspect of this failure is that until recently there was little disagreement about what

needed to be done. A common 16 plus examination needed to be created to end the divisive and illogical distinction between GCE and CSE. A levels needed to be liberalized (although at this point the universities entered their customary and reactionary dissent), and the reorganization of 16 to 19 education to make the best possible use of skilled teachers, perhaps by the more vigorous development of sixth form and tertiary colleges, needed to be pushed ahead.

However, since last summer, the new ministerial team with Sir Keith Joseph as Secretary of State and Dr Rhodes Boyson as Under Secretary responsible for schools have turned the clock back. They have embarked on an uncompromising defence of the traditional sixth form despite the accumulation of evidence that under present conditions such a policy is a

threat to high standards and a waste of, very scarce, public money. First, their decision to reject Manchester's plan for sixth form colleges made it much more difficult for local authorities to produce sensible schemes for the rational reorganization of 16 to 19 education; now Sir Keith's acceptance of a common 16 plus examination is likely to produce a similar danger in curricular reform.

Higher education is not a passive observer of these twists in DES policy of the upper secondary school. It is either a beneficiary or, with the Joseph-Boyson reaction, a victim. Universities, polytechnics and colleges have a vital long-term interest in the liberalization of sixth-form education and in the creation of the most efficient possible arrangements for sixth-form education.

Laurie Taylor



"Is everybody here? Yes? Still a few people trickling in from the bar? That reminds me. Would everyone be so good as to make certain that all these plastic glasses are returned to the bar? Sorry to strike an authoritarian note so early in the proceedings, but those of you who are old-timers at these gatherings will know that the staff here - from the domestic bursar right down to the head cook-and-bottle-washer - do their level best to look after us. So I think the least we can do is to try to think their lives a little easier. End of sermon."

"Yes, could you close the door at the back if everybody's here. Thanks very much."

"Well now, first of all, it's my very great pleasure on behalf of myself and the organizing committee to welcome you all here for yet another of our annual conferences. As I've said before on these occasions - sorry could you shut the door at the back, it's quite difficult up here to make oneself heard through all that racket. Yes, as I was saying, this little get-together does provide one of the few opportunities for a very large number of people from all over the country who are normally united by nothing more than a purely nominal allegiance to the same academic discipline to not only get together and realize they have nothing in common whatsoever, but also to strengthen and perpetuate any existing intellectual or personal divisions."

"Having said that, one must record the important differences that we've seen over this decade in the nature of the conference. Whereas in the past it was at least possible to assume that those who gave one of the turgid papers on the official programme did so in the hope that it might bring them some professional advantage - that they were, quite simply, greasing up to possible employers in other universities - one must now assume in these straitened times that the speakers are cross-exhibitionists who lack other arena in which to parade their second-rate personalities and third-rate minds."

"I'm also pleased to see that most of the usual bores have been able to get along again this year. Quite enough on the face of it for those to be at least one for each of those pointless discussion groups which are supposed to report back to the so-called plenary session which, following convention, will be half-empty as those with any sense push off to catch early trains."

"In particular this year I'm looking forward to another phoney debate on how the structure of our association might be made more democratic - especially as this will once again be initiated by a couple of our members who have in the past shown themselves quite incapable of doing a hand's turn of work for this organization or any other."

"Just a few other practical points. Coffee will be served between sessions, and as usual people so much like those at the back will be left with nothing but hot milk and the chef tells me that we may expect the usual 'varied menu' garnish with steak with pineapple; rabbit curry with extra tomatoes; and, of course, inadvisable stragouff."

"I think that's all for the moment, except to say that the film in the chemistry lecture theatre on Saturday will be *Citizen Kane*."

The Times Higher Education Supplement

April 9, 1982 No 492 Price 45p

Credit transfer gets go-ahead from the DES

by Paul Flather
Ministers have approved Britain's first major system of credit transfer between higher education institutions. A pilot project is to be announced soon which could be the first step towards far-reaching reforms in the structure of higher education.

The announcement comes three years after a feasibility study was submitted to the Department of Education and Science.

The pilot scheme in the south west of England will involve putting on record details of all courses run by colleges, polytechnics, and universities for use by careers advisers, tutors and lecturers, and students.

The scheme will be launched under the acronym ECTIS, the Education Credit Transfer Information Service. Higher education courses will be for access nationally, advanced and further education courses will be for access regionally.

Mr Peter Toyne, author of the feasibility study, said the pilot project would open the door to fundamental change. "It is the tip of the iceberg. For the first time students will be able to take up packages of education where and when they want."

Mr Toyne, now deputy director of Bishop Otter College in West Sussex, conducted his study with an £80,000 grant from the DES between 1977 and 1979. A further £40,000 study was carried out in 1980.

The delay in introducing the scheme hinged on differences inside the DES on whether it was possible to introduce a regional credit transfer project to see how it works, or whether it should be a national scheme or nothing at all.

It is understood that the Government strongly supports the credit transfer principle. Mr William Wal-

degrave, under secretary for higher education, is understood to be preparing a statement commending the flexibility involved.

He is particularly keen on the benefits likely to accrue to mature students who will not have to repeat partially completed courses to get now qualifications, and the benefits for continuing education.

Credit transfer is already practised at the Open University and by the Technical Education Council. Mr Toyne estimates that up to one in five students already in higher and further education would benefit from some notion of credit transfer.

He told a conference at Surrey University last weekend: "Although it will start in a small way it will certainly become bigger. Behind the pilot scheme is a clear philosophy challenging the present way of learning."

"Students will be able to learn what is appropriate over a much longer time. Education can and ought to be done in discrete packages. Education should be more flexible, and more widely available to customers."

Four areas of change are pinpointed: students will be able to drop in and out of courses, they will be able to switch locations, they will be able to study at different times of their life, and they will be able to mix more part and full-time courses.

The Government will advertise shortly for a director to head the new ECTIS project. The task will be to assess the relative value - in units - of different courses, and different parts of courses.

Inspectors find room for manoeuvre

by Charlotte Barry
Polytechnics and colleges have capacity to cope with substantially more students and could use their resources more efficiently. Her Majesty's Inspectors said this week.

In a report on the effects of local authority spending cuts the inspectors say that public sector higher and further education has proved very adaptable in spite of stricter financial controls and changes in the student population.

Their conclusions contradict Government reasons for a planned 30,000 drop in students on advanced courses by 1984-85. Tuition fees have also been halved in an attempt to dissuade institutions from boosting recruitment in order to raise funds.

The report says: "That higher and further education has this capacity also demonstrates that it was, and is, a generally well-provided service with rather more resource potential than has often been displayed."

But it warns that the system faces more severe challenges. It criticises the tendency of authorities and institutions to impose sweeping economic measures which are easily applied, rather than making specific changes in provision.

"Current financial policies call for a level of improved institutional efficiency and concentration of effort that will not be easily achieved by the economy measures used so far," the report concludes.

Detailed analysis revealed that while advanced further education had no difficulty in providing staff or teaching accommodation, increased demand in further education was applying stresses to the system.

More young people were opting for courses in nursery nursing, catering, hairdressing, art and design and business studies, but the numbers on part-time technical courses continued

to decline. In 54 authorities, extra provision was made for full-time non-advanced further education students including those on GCE O and A level courses. But the report says: "In many authorities, additional provision for GCE subjects continues to be made without any apparent reference to what is or might be provided in schools."

Spending on adult education and the youth service remained unchanged in the majority of authorities, compared to last year when 49 further reduced expenditure.

About two thirds of authorities increased spending on discretionary grants and the rest either maintained last year's level or reduced it.

The report warns that non-advanced further education is already being stretched by unemployed school-leavers, seeking additional qualifications.

Tough measures due on completion of theses

A tough regime to force rapid improvement in the completion rates for PhD theses has been revealed by the Social Science Research Council in anticipation of the Government report on postgraduate training published this week.

The SSRC says it is prepared to consider withdrawing quota awards from university departments which fail to improve low completion rates. According to one survey three out of five students had not submitted their work six years after starting.

The SSRC is already well ahead with plans to implement two of the main recommendations of the new report: to demand regular progress reports from supervisors of graduates students, and to publish annual surveys of PhD completion rates.

The White Paper, based on a report by a working party of the Advisory Board for the Research Council headed by Sir Peter Swinerton-Dyer, former vice-chancellor of Cambridge University, contains wide ranging proposals on the support and nature of the PhD.

Figures released for the first time by the SSRC show that even discussion of completion rates is having an effect: for 1980 the number of students collecting degrees six months after the end of their grant was five per cent, and for 1981 it was 11 per cent. The percentage of students collecting degrees 18 months late was 14 in 1980 and 21 in 1981. The SSRC is still far from satisfied. Mr Michael Posner, SSRC chairman said this

week: "From now on there will be a presumption that departments with poor completion rates may not carry on getting support."

The SSRC plans a watchdog role over recalcitrant social science departments. The regime will mean:

- Annual published surveys of completion rates
- Letters and warnings to departments which fail to raise low rates
- Removing quota awards from departments as a final resort
- Detailed schedules for completion from student and supervisor at the end of three years of grant support
- A progress report at the end of the first year
- A third-year "hurdle", with grants discontinued if supervisors cannot honourably say their students will complete.
- An early warning signal, still being discussed, requiring prospective PhD students to submit an outline proposal.

The SSRC, which together with other research councils collaborated closely with the Swinerton-Dyer team, has also backed proposals for more emphasis on formal training in research methods as part of PhD work.

Taught work, widely practised in the United States, has already been introduced into a new economics PhD at the London School of Economics, the MPhil and DPhil at Oxford, and the PhD management

continued on page 3



Peter Winch on G. E. M. Anscombe, 13

Social sciences in America, 8

The uses and abuses of quotation, 11

Poland's Operation Falcon, 8

Thousands accept terms for voluntary redundancy

by Ngalo Crequer
Applications by thousands of university staff for early retirement or redundancy have been accepted. Most will leave by the end of this session.

The University Grants Committee has made payment on account for a small number of lecturers and is considering many more claims.

At Leeds University 145 academic and related staff have applied to go early; 95 have been accepted, some have been refused and most of the rest are pending. At Manchester 121 have applied and been accepted. At Bradford, about 50 have been accepted.

Applications by thousands of university staff for early retirement or redundancy have been accepted. Most will leave by the end of this session.

The University Grants Committee has made payment on account for a small number of lecturers and is considering many more claims.

At Leeds University 145 academic and related staff have applied to go early; 95 have been accepted, some have been refused and most of the rest are pending. At Manchester 121 have applied and been accepted. At Bradford, about 50 have been accepted.

Natthe ends Burnham pay talks boycott

by David Jobbins
College lecturers are ending their boycott of the pay negotiating machinery started in protest at the presence of a rival non-TUC trade union.

Although they maintain their opposition to the decision late last year to grant the Association of Polytechnic Teachers a seat on the Burnham, further education committee, the main union has been forced to concede that alternative channels for talks with the employers are not immediately possible.

Natthe hopes that informal negotiations which have always played a significant part in Burnham proceedings can be exploited to the full, leaving full sessions when APT is present to the minimum required by law.

The union underlined its tough stance against APT, repudiating its local bargaining units of the policy of refusing to negotiate with the non-TUC union is present. APT will also continue to be excluded from the Burnham teachers' panel.



Natthe claims widespread backing for his ban on voluntary duties, which it expects to be implemented after Easter. "We will be considering escalating the action if we do not get an improved offer," Natthe said.

Leverhulme looks at the quickie degree

by Paul Flather

A call for two-year ordinary degree courses at universities and polytechnics was made at the Leverhulme inquiry into higher education meeting at Surrey University last week.

Professor Leslie Wagner of Central London Polytechnic urged universities and the Council for National Academic Awards to consider the proposal in a paper to the one-day follow-up conference on change and adaptation.

He said universities should also consider submitting courses to external peer reviews at regular intervals. The four areas of change Professor Wagner looks at are: between institutions and the wider political system; between and within institutions and in the mechanisms to make adaptation easier.

Professor Wagner, who convened the main Leverhulme conference on institutional change, makes 14 recommendations in all, among which he calls for an enhanced role for local communities in the national governance of higher education, strategic planning groups with lay and academic membership to run institutions, and a reserved seat on the

governing bodies of all institutions for local MPs.

Other recommendations are for a national credit transfer information network and a small proportion of funds, about 3 per cent, set aside for institutions submitting proposals for innovation.

The rest of the list calls for a longer-term early retirement scheme for academic staff, a more open approach to planning, and the use of finance as the most effective way of forcing change in higher education.

Professor Gareth Williams, Leverhulme inquiry director, defended the inquiry against charges that it was ambling along in a nice old-fashioned way.

He said it would produce radical solutions. It was trying to retain institutional autonomy while increasing their responsiveness to local and national needs.

"This would appear to be a contradiction," he said. It does seem to be an opposition between those two ideas. But this does also seem part

of the trick that we have to achieve in future.

The major criticisms from the floor was that no reference had been made to the human dimension of change, and no attempt made at pinpointing "good" decisions or "better" planning.

Agenda for Institutional Change in Higher Education, edited by Leslie Wagner, £6.60, from the Society for Research into Higher Education, at the University, Guildford, Surrey, GU2 5XH.

Not enough discipline at UGC, says Bragg

The University Grants Committee must be reconstituted to become more representative now its role has changed, Dr Stephen Bragg, former vice chancellor of Brunel told the conference.

He said that when the UGC was making academic decisions it needed academic peers, but now it had a more direct role and greater social responsibility it needed a more representative membership.

Dr Bragg, speaking on planning for change, said it was surprising no librarian had ever sat on the UGC,

and it needed a computer manager to help with surus, and an administrator to save it from some of its own English.

He criticized the committee for not explaining its decisions, quoting his experience at the Civil Aviation Board. The board received recommendations, and if they were rejected it had to say why. "This would be very good discipline for the UGC," he said.

Dr Bragg, proudly asserting that he was one of the very few vice chancellors who had done a "very valuable" Harvard business course,

went on to knock down several more beliefs.

He said it was quite badly to pay university lecturers according to age, and detailed a scheme for all academics to be paid the same average wage, but to put in fewer days the more senior they were.

He also described early retirement as a dreadful waste of resources. Education is about passing on experience, and the older you get the more experience you get. How absurd to be told after you have accumulated your wisdom you are not necessary", he said.

News in brief

Student union cash to be investigated

Bristol Polytechnic's governing body has called in accountants to investigate the finances of the student union following an admission by the union that its bars and services are no longer financially solvent.

The governors say they will withdraw the student union's grant next year unless it implements savings and other alterations to its staffing. Most previous alterations to its staffing, which this year are expected to make a £20,000 loss.

Decision on grants

The Scottish Education Department, which announced earlier this year that students would no longer qualify for a grant for repeat years except on medical or compassionate grounds, has announced two minor concessions which will benefit about 250 students only.

Students will be allowed an extra year's grant if they are taking an ordinary degree, normally completed in three years, but which can be achieved by a series of credits obtained over four years. If by the January they were "irrevocably committed" to a four-year course, the grant will be extended. They will also be eligible if they have failed a course, such as some courses in medicine, which require a repeat year before a rest can be taken.

Poly tries to force council's hand on pool allocation

by Charlotte Barry

Birmingham Polytechnic's governing body this week agreed not to close courses in the face of a £750,000 cut in this year's budget.

Governors passed a motion which effectively resisted the city council's refusal to fund the shortfall between the advanced further education pool allocation and the 1982-83 estimates.

The motion, tabled by the polytechnic's joint union liaison committee, said there would be no course closures, no reduction in access to courses for local people, and no reduction in the service provided for the community and the economy.

It instructed a delegation from the governing body to seek a meeting with the city council aimed at getting agreement on funding based on the approved academic plan. The polytechnic is concerned that repeated one-off cuts cause damage to long-term planning.

The governors also agreed to carry out an independent audit of the polytechnic's overall finances and assessment of its resource needs.

They accepted figures submitted by the unions showing that the city council will be providing the polytechnic with only £90,000 over the rates compared to £2.7m last year.

Birmingham City Council has already told the polytechnic to cut its teacher education staff by 20, so student/staff ratios rise from 7:1 to 9:1.

Staff in the school of education and department of art education have been asked to apply for early retirement or voluntary redundancy by the end of this month. Any short-fall may lead to compulsory redundancies before August 31, the city council has warned.

The National Association of Teachers in Further and Higher Education is resisting the possibility of compulsory redundancies, as it claims the authority agreed to give 12 months' notice.

Redundancy

continued from front page
At Lancaster, 21 will go. At Reading, 20 have been accepted and 24 have been accepted at Swansea. At Durham, 10 are definite, another six likely and more considering. At Aston, by the end of 1981-2, 64 will have gone, with five more to go later.

At Exeter, 16 will go by September. At City, 42 will go at Kent. Oxford expects some 200 or so to go. 40 have been accepted at Cambridge. At Hull, 38 are going.

Edinburgh has approved 27 applications and Glasgow 29. At St Andrews 26 staff are interested and it is thought about half will be accepted. Four academics at Stirling want to retire early; the university wants to shed 50 posts.

Leaders of Britain's university while collar workers are angered by the compensation scheme for non-teaching staff who lose their jobs before September 1984.

Mr Alec Thompson, national officer of the National and Local Government Officers' Association condemned the proposals as unfair and discriminatory against women.

The scheme offers immediate payment of a lump sum compensation for staff over 50. But for workers under 50 the maximum compensation is the state redundancy payment of 1 1/2 weeks' pay for each year of service, with the one exception that the upper earnings limit of £130 a week is removed.

The costs of the scheme are to be underwritten by the UGC. Where better schemes are in operation, the UGC will only cover the cost up to the limit of its own proposals.

Managers blamed for project losses

by Robin McKie

Poor management at Loughborough University's consultancy company was a major cause of its £176,000 loss last year. The deficit led to 15 redundancies, a quarter of the company's staff.

These figures are revealed in the annual report to the university court. It also states that the management of Loughborough Consultants has now been reorganized to leave a new slimmer structure.

Writing in the report, the managing director of the company, Mr D. J. Spinks, describes last year as difficult and disappointing. "It was difficult because of the recession and disappointing because two major projects had to be written off due mainly to poor management."

Because of these problems, the company suffered a total loss of £176,000 on a turnover of £826,000. This loss was carried over in its accounts, and a company official said finances were now "climbing up-

wards slowly" because of improvements in trade in the engineering industry which supplies most of Loughborough Consultants' business.

The company, which is almost completely self-financing channels a considerable amount of its work back into the university. Last year this amounted to work worth £266,000, while the remainder of its activities were carried out by a project team run directly by the company.

Most of the company's difficulties have been with the project team. In future the directors hope to involve academic departments more closely with the project team," the annual report states.

The new simplified management structure is aimed at providing improved internal communication and better project control. The electronics and design groups have been merged with the senior staff who report directly to the management team of an operations manager, a marketing manager, an accountant and the managing director.



Testing the pants of a long distance runner on an ergo meter is part of a one-day protest to save Madley College, North Staffordshire Polytechnic. In May students are running in relay to see Sir Keith Joseph, Education Secretary about the proposed closure. The college is famous for its athletes including hurdler Yvette Wray.

Temporary reprieve for architecture department

by Ngaiio Crequer

Bristol University's department of architecture has been reprieved, at least temporarily, after a decision by the university court to set up a team of four to investigate its future.

A special meeting of court voted by 92-90, in view of the concern at the decision by senate to close architecture, to set up the inquiry team "to investigate the future of the department and to report back to court before any action to proceed with closure is taken by the university."

The team will include one member nominated by the vice chancellor, one by the Royal Institute of British Architects, and one by the president of the Association of University Teachers, to be chaired by an independent nominee of the chancellor, Professor Dorothy Hodgkin.

A motion not to proceed with the

closure of architecture but to ask senate to prepare alternative proposals was defeated by 86-96. But the decision to look again at the proposal to close architecture is being regarded as a significant victory by the AUT and RIBA, who have constantly argued against it.

Throughout the protracted academic planning process at Bristol, the RIBA has pointed to the excellence of the department and protested as its proposed closure.

The University Grants Committee had merely recommended that Bristol should discuss cooperation with Bath on the subject. The vice chancellor proposed that it be closed, along with four other departments. The committee of four deans was asked instead to produce some across the board cuts, but also came down in favour of closure, which senate accepted. Then the special meeting of court was called.



Pauline Bennett, a social work graduate at the University of East Anglia, presents a copy of the first in a series of social work monographs to Professor Michael Thompson, vice chancellor of UEA. The reports, which are edited by Martin Davies, professor of social work at the university, are based on the best dissertations from masters degrees in the subject.

Reply sent to Hull

Dr Edward Parkes, chairman of the University Grants Committee has told MPs that universities were not pre-selected for differential cuts.

In reply to a letter signed by 14 MPs from the Hull area protesting at the effect of the cuts on Hull University, Dr Parkes said the Government had imposed the cuts and they could not be absorbed in the scale without disorder and disunity.

Although the committee is guided by subject provision, it does look at how institutions were affected as a whole, and at inter-disciplinary teaching and collaboration with neighbouring universities.

Research promotion

Electronics experts in Scotland have formed a consortium to promote developments in electronics in higher education, industry and medicine.

The new body, the Digital Signal Processing Consortium, chaired by Dr Tarkenton, senior lecturer in Strathclyde University's Department of Science and Telecommunications, will promote the industrial application of university research.

Raine reappointed

The Technician Education Council set up in 1973 has been reappointed for its fourth three-year term at office under its existing chairman Mr Neal Raine who has been reappointed. Among new education members on the council are Mr A. J. Collier, chief education officer of Lancashire County Council, Mr J. Leather, principal of Derby College of Further Education, Mr A. Levine, senior lecturer in computer science, Hatfield Polytechnic.

Degrees in dance

The London School of Contemporary Dance is introducing an honours degree in contemporary dance, to be dated by the University of Kent. The school will provide the practical and professional training for the degree on the course, which will begin in September, 1982.

Recruiting reduced

The quality of unemployed graduates has risen noticeably with talented, well-prepared people wherever they applied, according to a survey conducted by Newcastle University's Careers Advisory Service.

OU bid for senior staff

The Open University is considering the creation of extra chairs to bring it in line with conventional universities.

Proposals to appoint up to nine more professors to go to the senate and council after the agreement of the university planning board.

Vice chancellor Dr John Horlock argues that more senior staff could provide leadership, particularly in research, in a paper circulated to staff. The ratio of professors to other staff in the OU is only 1:15, compared to 1:10 elsewhere, he says.

Dr Horlock is concerned about the range of disciplines covered by OU professors. There is only one biology professor, for example, who is expected to cover a number of specialisms.

He suggests the new professors could be appointed in three ways: either from the pool of senior lecturers in the OU, by using recurrent grant money to fund chairs occupied by outside appointments, or by using money already supplied by outside funding bodies.

There is already widespread support in the university for the early creation of two chairs financed by the Science and Engineering Research Council.

The council funds part of the post-graduate updating courses for scientists and technologists in industry. The two chairs would be in information technology and manufacturing systems.

The maths faculty has already prepared a case for a chair in maths education which would build on recommendations contained in the recent Cockcroft report.

Agricultural posts axed

More than 150 posts should be axed at two of the Agricultural Research Council's principal institutes, an internal review has urged. The cuts would save between £1.1m and £1.4m—although the report warns that further savings would still have to be made in the council's funds.

The review states that if its proposals are accepted by the council at its meeting on April 20, then about 47 staff posts will have to be cut from its Long Ashton research station, near Bristol and a further 101 will need to be transferred to the council's East Malling research institute. There will also be a loss of 110 staff from its Animal Breeding Research Organization, near Edinburgh, and its out-stations.

The council's aim is to cut £3m from its annual budget by 1985—about 4 per cent of its total—which will offset cuts in funds made by the Government and provide some cash for new research programmes. The council is pledged to maintain university research projects and has decided to make cuts in the operation of its own institutes.

Originally earmarked for £1.8m cuts, the ABRG station will receive an annual budget of £1.2m in 1985 with the possibility of further funds of £100,000 "for important new work of high scientific merit". The report concludes that the main effort of the station should concentrate on the genetics of farm animals and not on developing new varieties of farm animals.

At the Long Ashton station, where savings of up to £450,000 are to be made, most of the cuts will fall on fruit research.

Cuts could prevent vital medical research work

by Nick Wood

Up to 400 teaching posts in Britain's medical schools have been frozen because of Government cuts in University Grants Committee budgets, the chairman of the House of Commons Social Services Committee revealed last week.

This is nearly five times more than the official figure of 88 posts lost which the Department of Health has defended as being of little practical significance.

Mrs Renee Short, MP, who is leading an investigation into the impact of the cuts, promised a "hitting" report when her committee finishes its work after the Easter recess.

She said the committee had found that the economies forced on schools by the UGC had produced damage on a scale far greater than that conceded by ministers.

The figure of 400 posts was based on information from medical deans, in contrast to the Government data which has been supplied by health authorities.

"An increased workload of caring for patients is going to be pushed on to the National Health Service because many of the posts have both clinical and teaching commitments," she said.

"Much important research work will stop at once. And in certain specialties such as pathology and anaesthetics, where there are already very few staff, lopping off even one person can have catastrophic effects."

Mrs Short was speaking after addressing a conference organized by the British Medical Association on medical unemployment. She told the doctors that that UGC cuts were the "greatest threat facing the profession today."

The Government's action was, however, defended by Lord Elton, a junior minister at the Department of Health. In real terms, the Government was spending 5 per cent more than in 1979, and, according to his figures, only 29 of the posts frozen were regarded as "important" by health authorities.

Mrs Short added that there had been a lack of consultation between the departments of health and education. "Ministers did not understand the scale of the problem," she said.

If medical schools selected students on the basis of their academic results alone, 80 per cent of the intake would be women; Dr Rosemary Rue, Oxford's regional medical officer told the conference. But some "extraordinary subtle mechanism" kept the sex ratio of medical students close to the 50:50 mark.

She told the conference that male doctors had a "deep-rooted prejudice" against women doctors which came swiftly to the surface when there was competition for jobs.

But this attitude would have to change. "On present intake rates to medical schools, in 10 years at least one-in three consultants, and family doctors would be women."

Alternative youth training scheme runs into trouble

by Patricia Santinelli

A disagreement this week among members of the Manpower Services Commission's task group investigating an alternative to the Government's controversial youth training scheme further threatened the likelihood of a unanimous report to the Secretary of State for Employment.

Committee members cannot agree over binding written contracts between employers and trainees and the level of allowances to be paid to young people, both of which are cornerstones of any alternative scheme.

Already last week education members on the group sided with the Confederation of British Industry representatives against the Trades Union Congress in opposing any increase in a proposed £25 allowance at September 1983.

The TUC is adamant that the allowance should be set at a minimum of £30 a week—the equivalent be paid under

Robinson gets Preston job

Mr Eric Robinson, who has been at the centre of the controversy over the proposed merger of Bradford and Ilkley colleges, has been chosen as the next director of Preston Polytechnic.

The appointment will mean a return to his home county and to the polytechnic sector which, as a member of the late Mr Anthony Crossland's working party, he helped to create. Mr Robinson was selected from a shortlist of seven out of 71 applicants.

Scotland's universities would have been better off financed through a Scottish Assembly rather than the University Grants Committee, according to a Scottish Trades Union Congress delegation which this week met education under secretary, Mr William Waldegrave.

The cuts would affect the whole of Scottish higher education, claimed the delegation, led by congress chairman and secretary of the Educational Institute of Scotland, Mr John Pollock.

They asked for assurances that the 14 Scottish central institutions would be able to take in more students to balance the cuts in university intake.

Funds freeze

Argentinian students in the UK will find their funds frozen as a result of the British government's economic retaliation for the invasion of the Falkland Islands. Restrictions imposed this week mean that no British bank can accept instructions from Argentina—effectively blocking the transfer of money.

But the Argentinian embassy this week appealed to the students to keep calm. "There is nothing to worry about and there is mediation between the two governments on this question," a spokesman said.

Argentinians in real difficulty are advised to ring the Bank of England (01 601 4444) to argue their case, but it seems likely that exemptions will be granted only in the most exceptional cases.

According to the Department of Education, there are about 400 Argentinian students in the UK.

Advice postponed

The Advisory Committee for the Supply and Education of Teachers expected to recommend a 20 per cent cut in 1983 intakes to teacher training courses, decided last week not to give its advice to the Government until the beginning of next month.

The delay was caused because a heavy workload prevented the committee from discussing its recommendations.

Pay freeze exchange rejected

An offer by the university employers to save jobs in exchange for freezing pay has been rejected by unions representing manual workers and technicians.

The employers said that 450 manual workers and 500 technicians' jobs could avoid the axe if the unions went along with no increase from last Thursday.

But they were unable to give leaders of the manual workers a guarantee that there would be no job losses if the proposal was accepted, neither could they identify the posts which would be saved.

"We said there is no evidence that taking low pay protects jobs," Mr Harold Wild, trade union side secretary of the central council for university non-teaching staff, said.

Manual workers have now been offered a flat rate increase of £4.29 a week, worth between 5.6 per cent for employees on the top scale of £75.71 a week up to 7 per cent for

the lowest paid on the basic £60 a week. The offer is being put to the 24,000 manual workers in the consortium which negotiates salaries for most universities without a recommendation from union leaders.

Although the manual workers had claimed a rise which would at least maintain their standard of living, the offer could well be accepted.

Leaders of 20,000 technicians were this week considering the next step after their rejection of a 4 per cent offer also made last week. The offer did not apply to trainee grades who last year also received a smaller increase.

Scottish further education pay talks have been adjourned with lecturers rejecting an offer of 4 per cent, but there are hopes for an agreement at the next meeting in a fortnight with an offer of around six per cent.

Research salaries for engineering postgraduates are rejected in the report. Despite calls from many engineering professors for salaries of £5,000 to £6,000 a year for PhD students to attract the best graduates away from industry, the report states that much of the problem is exaggerated. "In our view, the adverse repercussions of such a case would outweigh its direct advantages," it states.

The Report of the Working Party on Postgraduate Education, Command 8337 HMSO £7.

Completion rate measures

continued from page one

programme at Aston.

The report recommends research councils should be free to set their own levels for postgraduate awards, and make fees—only awards.

The report also urges changes in the mode of the PhD with "pieces of paper" offered to social science postgraduates after three years work.

The SSRC has been encouraging linked awards, with graduates following the example of their counterparts in the natural sciences by working inside larger research teams.

The report also recommends a review of postgraduate policies by all

Olga Wojtas and David Jobbins report on the Nation Union of Students' Easter conference

Soviet boycott bid fails

A row broke out at the National Union of Students' conference in Blackpool over whether the union should boycott the forthcoming European meeting of students unions in the Soviet Union in protest against martial law in Poland.



One of the anti-NUS candidates at the centre of the forgery controversy, Mr Detlev Anderson (left), poses with supporters at the conference. They are, from left to right, Chris Honeyborne, Stuart Clegg, Martin Calman and Jeremy Fry.

Tory resigns in fraud row

A leading Tory student has resigned in the wake of a row over forged signatures on nomination papers for anti-NUS candidates for the National Union of Students executive.

Mr Nicholas Gibb, chairman of the Federation of Conservative Students' student affairs committee, was one of two FCS officers alleged to have been involved.

There has been no suggestion that the candidates themselves knew of the forgeries and their withdrawal was voluntary.

Academic witch-hunt feared

Mr Neil Stewart, NUS president elect, told students not to cooperate in any sort of assessment of lecturers which could lead to redundancies.

The recession is making firms and institutions take a more hard-headed attitude to recruitment. They are insisting on value for money from any sandwich course student they employ in terms of that student understanding business criteria as well as his or her own discipline.

Mr Grzegorz Banecki, the official representative in Britain of the underground Independent British Students' Union, NZS, received a standing ovation when he urged support for the union.

Cross campus ballot plan

Compulsory cross campus ballots for election of NUS conference delegates came a step closer last week.

Delegates gave the necessary two-thirds backing to an executive plan for the step which is expected to inject a moderating influence into the student movement.

Apartheid approach 'wrong'

At a conference fringe meeting, Mr Tom McNally, education spokesman for the Social Democrats, criticized the Government for using a demographic approach to student numbers, and cutting intakes because of a downturn in the number of 18-year-olds.

Mr McNally also called on the Department of Education and Science to conduct a survey of modern living standards to decide the level of the student grant, which he said was arrived at "by ad hoc increases over 20 years on a baseline which none of us is sure was right to begin with".

Students suggest radical teacher training changes

A new system of initial and in-service teacher training which would integrate undergraduate and post-graduate courses has been proposed by the National Union of Students.

In its proposed model for integration, which would also bring in non-standard entrants through special access courses, all new students would be able to start a general course and specialise later for a teaching qualification.

University unions campaign on cuts

The university cuts are a "new form of madness," say the campus trade unions.

Shortage of engineers by 1984, report predicts

A major decline in numbers of engineering and technology graduates has been forecast for 1984 - even before current higher education cuts have taken effect.

However, the most significant reductions between 1981 and 1984 are in engineering and technology, social administration and business studies; and in languages.

Placement problems increase

Difficulties in finding placements for students on sandwich courses are creating doubts as to whether this is the best system for combining work experience with further and higher education.

The recession is making firms and institutions take a more hard-headed attitude to recruitment. They are insisting on value for money from any sandwich course student they employ in terms of that student understanding business criteria as well as his or her own discipline.

Sheffield Polytechnic principal Rev. George Tolley said at a conference on Future Patterns of Education, Training and Work: "In the face of these, and other, pressures I believe we have some serious thinking to do about sandwich courses."

Polys ready for research boom

by Paul Flather

Polytechnic lecturers are hoping for a larger share of research funds following the introduction of the new committee structure at the Social Science Research Council.

The SSRC's carefully planned structure of six new standing committees outlined in a major policy document last year, gets underway in the summer, assuming no major repercussions from Lord Rothschild's current review of SSRC work.

Dr Nigel Lemon, head of social sciences at Sunderland Polytechnic and a member of the CNAA combined social sciences board said he was disappointed with the level of SSRC funds which polytechnics have succeeded in attracting.

University, said polytechnics were looking for a "reasonable representation" on the new committees.

Professor Gutteridge, who also sits on the CNAA council, confirmed the prevailing view inside polytechnics that too little SSRC money has come their way.

No figures exist for the amount given by polytechnics but in the current year £880,000 (about 17 per cent) from a £5.2m total research budget went to polytechnics, colleges, and independent research units, the latter taking the bulk. The rest goes to university-based research.

Burglary area students fail to get cover

by Olga Wojtas

Endsleigh insurance company, which deals almost exclusively with student insurance, has stopped issuing personal possessions policies to Manchester students renting local authority properties because they are being regularly burgled.

Endsleigh charges a premium of £12 for every £1,000 of property covered, and usually expects to pay back between 60 and 70 per cent but has had to pay out £60,000 on £20,000 worth of premiums in Mossdale.

Ms Teresa Murray, student welfare officer at Manchester University, who lives in Mossdale, said the thefts, mainly of electrical equipment such as televisions and hi-fis, were mainly because the flats had doors which were easily kicked in.

Around 1,000 students live in Manchester's Mossdale area in a three level complex of flats joined by walkways which was built in 1970 but were hard to let because of rapid deterioration.

Endsleigh's general manager, Mr Brian Renshaw, said: "It's phenomenal. We can't let it continue like this." The company is now considering raising its premium for Mossdale to £20.

The students did not feel the police were pursuing the cases very strongly, she said, perhaps because there were so many incidents, and because the walkways enabled intruders to escape easily. One answer was for the council to fit the properties with sturdy doors.



Mr Goran Warff, a Swedish ceramics designer, demonstrates his technique at Sunderland Polytechnic. Mr Warff, who has exhibited his work throughout the world, most recently in Japan and North America, will head a new honours degree in glass and ceramics starting at the polytechnic in September. He will be helped by another Swede, Mr Willy Andersson, a glassmaker, who has taught all over the world.

Satellite scans sea for slicks

Scientists at Lancaster University have developed a space-age method to identify vessels polluting the seas. The method uses infra-red pictures from space satellites to find oil slicks from offending tankers.

Most oil pollution affecting the seas does not originate from spectacular disasters such as the Amoco Cadiz spill in which the polluter is easily identified. It is caused by the discharge of oily water from the bilges or cargo and ballast tanks.

The candidates finally elected, all of whom will be going to the Soviet Union, were newly elected national secretary Ms Jane Taylor of the Left Alliance, executive member Mr John Anzani (independent) and Ms Ruth Cadbury, of the National Organization of Labour Students.

Conference accepted an executive strategy document, proposing the establishment of a West European information bureau - a matter on which other European student unions have been urging Britain to take a lead.

It could also monitor the re-emergence of fascist and racist organizations and how students are able to deal with these," he said.

The document also proposes increased participation in the European Community, through its youth forum, and in inter governmental organizations such as the Council of Europe.

For the first time since 1968 the Communist Party, a leading component of the Left Alliance, has no one on the executive, but the new alignment between Liberal and Social Democrats students scored its first victory with the election of Ms Jacqueline Sadek as a part-time member.

Labour students now hold ten out of the 19 places on the executive, including the Welsh and Scottish chair persons. The National Organisation of Labour Students increased its representation from five to seven, while the Left Alliance representation slumped from six to four, of whom only one, national secretary Ms Jane Taylor, is a full-time member.

The Socialist Students Alliance, "wet" Tories and independents have two each, while the Socialist Workers Party and the SDP have just one each.

Mr McNally also called on the Department of Education and Science to conduct a survey of modern living standards to decide the level of the student grant, which he said was arrived at "by ad hoc increases over 20 years on a baseline which none of us is sure was right to begin with".

Mr McNally condemned the Government's policies on full cost overseas student fees which he claimed seemed at first sight to be saving the British taxpayer money, but in fact meant that individual colleges were being encouraged to go round the world for students.

Mr McNally also called on the Department of Education and Science to conduct a survey of modern living standards to decide the level of the student grant, which he said was arrived at "by ad hoc increases over 20 years on a baseline which none of us is sure was right to begin with".

Mr McNally condemned the Government's policies on full cost overseas student fees which he claimed seemed at first sight to be saving the British taxpayer money, but in fact meant that individual colleges were being encouraged to go round the world for students.

Mr McNally also called on the Department of Education and Science to conduct a survey of modern living standards to decide the level of the student grant, which he said was arrived at "by ad hoc increases over 20 years on a baseline which none of us is sure was right to begin with".

Mr McNally condemned the Government's policies on full cost overseas student fees which he claimed seemed at first sight to be saving the British taxpayer money, but in fact meant that individual colleges were being encouraged to go round the world for students.

Psychologists urged to speak out on nuclear war

by Robin McKie

The psychology profession was urged last week to unite to "expose the illusions" that there would be a future for humanity after a nuclear war.

Professor Robert Jay Lifton, professor of psychiatry at Yale University, was speaking at the annual conference of the British Psychological Society, which was being held at York University, when he attacked Western governments for their deliberate falsifications over the issue of civil defence and nuclear war.

Whites, blacks blame system

Both black and white unemployed youths blame the system far more than each other for racial discrimination in Britain today.

Dr Miles Hewstone, now based at the Max Planck Institute for Social Psychology in Berlin, said he had expected that white youths would blame most blacks for the problems of discrimination today while the black youths would blame the police, teachers and other establishment figures.

Dr Hewstone believed these results confounded the idea that there was strong racial prejudice among working class people and that the joining together of young blacks and whites during the 1981 city riots backed his study which was carried out shortly before the disturbances.

Shortage of engineers by 1984, report predicts

A major decline in numbers of engineering and technology graduates has been forecast for 1984 - even before current higher education cuts have taken effect.

However, the most significant reductions between 1981 and 1984 are in engineering and technology, social administration and business studies; and in languages.

But the report adds: "By 1984, the number of engineering and technology graduates will have risen by only 22 per cent compared with an expected 31 per cent for all types of university graduates since 1970."

The Times Higher Education Supplement

Important news for New Subscribers

New subscribers to The Times Higher Education Supplement can now take advantage of our special introductory rate of £22.50 for a year's issues - even cheaper than buying it from your newsgagent. Simply complete the coupon below and our computerised subscription service will process your order at once.

*Offer applies to new subscribers in the UK only.

Please send me The Times Higher Education Supplement for one year. I enclose my cheque for £22.50.

Please print
NAME _____
ADDRESS _____

Signature _____
Date _____

Mail this coupon with your cheque to Times Newspapers Limited, Subscription Manager, Oakfield House, 35 Perrymount Road, Haywards Heath, West Sussex, RH16 3DH.

Overseas subscribers should write for information to the address above.

North American news

Scientist attacks CIA plans

from Peter David

WASHINGTON Despite a flowering of committees to deal with research secrecy, and despite expressions of goodwill from both sides, American academic scientists appear to be no nearer an agreement with government security agencies on the issue.

At a joint meeting of two congressional science and technology committees last week, members of Congress heard opposing views advanced by Dr Frank Press, president of the National Academy of Sciences, and Admiral Robert Inman, deputy director of the Central Intelligence Agency.

Admiral Inman, repeating a message he first delivered to a meeting of the American Association for the Advancement of Science, told congressmen that the academic community had to find ways to prevent American technical expertise from falling into the hands of potential adversaries in war.

Calling on universities to stem the flow of sensitive information to the Soviet Union, Admiral Inman warned that the government would introduce its own controls if the academic world failed to produce methods of safeguarding the national interest.

"It is time for the scientific community to accept that there is an outflow, and that outflow is potentially damaging," he said. He claimed that although the seepage of scientific secrets from universities was small at present, it was likely to grow as other avenues of scientific espionage were blocked off.

But the joint hearing also heard testimony from Dr Frank Press, former science adviser to President Carter, warning that excessive zeal in protecting America's research lead could damage its scientific health.

The proposed expansion of the scope of classified information into

peripheral areas could force some of the best universities to refuse to undertake some kinds of basic research because they refused to accept classified projects, he said.

"It would be unfortunate indeed if by these steps we discouraged major components of the scientific research community from continuing basic research in areas of potential importance to our national security.

"We should consider how much our security is harmed by denying government access to many of the nation's most brilliant scientists and engineers who work on university campuses."

Dr Press's scenario has in fact already come close to reality in the case of Stanford University, one of the United States's leading research campuses but one which refuses to accept any classified research funding.

Recently, it refused to accept state department restrictions on the activities of a visiting Soviet robotics expert, Dr N. V. Umov. Dr Umov's visit was cleared only after intervention by the National Academy of Sciences led the State Department to relax some of its restrictions.

Dr Press told Congress that the Stanford dispute had forced the national academy to review its role as the agency through which the State Department informed universities of the restrictions it proposed on the visits of foreign scientists.

Expanding government emphasis on security and mounting concern in the universities about restrictions which were difficult or impossible to implement had persuaded the academy to start work on the production of new internal guidelines, he said.

"In the longer term, the impasse between the Government and the academic world could only be solved by a careful study of their respective

needs, however. Dr Press announced that the Department of Defence had agreed to cooperate in an academy study designed to report on the issues by September, with a final report in March 1983.

The study will be chaired by Dr Dale Corson, resident emeritus of Cornell University. It is to be operated jointly by the National Academy of Sciences, the National Academy of Engineering and the Institute of Medicine.

Terms of reference for the 18-member study committee call for a thorough review of the proper balance between free scientific communication and legitimate concerns about the outflow of militarily-sensitive information.

Particular attention will be paid to computer science, mathematics research that bears on cryptography, research involving magnetic-bubble memory devices, laser optics and very high speed integrated circuitry. All these areas have been identified by government departments as particularly important to national security.

The new committee will not however be the only forum working urgently to find some resolution of the developing crisis between academe and national security agencies.

At the recommendation of the Pentagon's defence board, a similar body was recently established under the joint chairmanship of Don Kennedy, President of Stanford, and Mr Richard Delauer, under-secretary of Defence.

While the various committees meet to review the problems, new strains between the science community and the government are expected to grow as a result of the administration's increasing concern about Soviet political intentions.

Last week, for example, the administration announced its intention of



Frank Press: fears for science

withdrawing support for the Vienna-based international institute for applied systems analysis, an international research agency which depends largely on funds from the United States and the Soviet Union.

American scientists critical of the decision to withdraw from the 10-year-old institute claim the Reagan administration believed that Soviet scientists used its facilities to poach western scientific ideas without giving much in return.

And in another dispute between academe and science and the Government, Dr Press has written to Mr William Clark, President Reagan's national security adviser, objecting to a new executive order which will increase the range of information which can be classified for security reasons.

"Many scientists and engineers in academe hold that free and open communication is the sine qua non that promotes and perpetuates the strength and vitality of the educational and scientific endeavours upon which the nation's technological base is founded," the letter says.

Sandwich courses under threat

Cooperative education, American version of the British sandwich degree, is likely to be "stopped in its tracks" by the cuts President Reagan proposed in his 1983 budget, Congress was told last week.

Dr Kenneth Ryder, President of Northeastern University and downer of the cooperative movement, told a house appropriations committee he was "bewildered" by the administration's decision to damage a unique form of higher education which had proved to be cost-effective and had built strong bridges between industry and the universities.

The president's budget proposes eliminating a federal government grant set up several years ago to provide funds to universities and colleges which want to start cooperative programmes. The grants are currently worth \$14m. They support 111 institutions and about 16,500 students.

"Coop" students in the United States spend alternate periods at university and in employment. The system enables them to earn a substantial proportion of their fees and living costs and to gain vocational experience.

In his testimony last week Dr Ryder said the administration had recognized the value of the cooperative approach. The government's budget documents said co-op students showed a clearer sense of career objectives, but justified ending the funding because it had been so successful that colleges no longer needed a federal incentive.

According to Dr Ryder, however, the success of federal initiatives in cooperative education had just begun. Although the movement had grown rapidly and produced co-op degree programmes at nearly 1,100 colleges, fewer than 5 per cent of American undergraduates were on such programmes and there was "no potential for more growth."

"Few institutions have moved totally to the cooperative model in Northeastern University in Boston has, and many still run small programmes in narrowly specialized disciplines," he said.

Quoting a research study commissioned by Congress in 1977, Dr Ryder said that some 250,000 students were enrolled in cooperative programmes but the number could be raised to over a million.

The same study found that cooperative education was a most cost-effective way to finance higher education than the federal student loan programme. "Coop" students pay an average of \$600 a year in federal taxes, representing about 15 per cent of total government revenue of around \$150m.

He continued: "If the proposed cuts are implemented, other colleges and their students to be denied the assistance needed to set up and expand similar co-op programmes that are the very model of integrating education with a private enterprise economy that President Reagan values so highly."

Dr Ryder told the appropriations committee that employers had been enthusiastic in support of the cooperative movement because it gave them a reliable source of trained and experienced university graduates.

Large companies, like General Electric and the Burroughs Corporation, retained 70 per cent of their co-op students as full-time employees.

He concluded: "The students who will benefit from these programmes are vitally important to all of us and to our nation's future. Their parents cannot afford to put them through college - they are willing to pay for education and determination we choose to discourage?"

Peter David, North American Editor, The Times Higher Education Supplement, National Press Building, Room 541, Washington DC 20045, Telephone: (202) 638 6765

Overseas news

Leak 'mothballs' Irish expansion

from John Walsh

DUBLIN

The harsh facts of economic life were spelled out to Irish academics at a recent conference in University College, Galway organized by the Irish Federation of University Teachers to discuss a leaked memorandum on financing.

The plan set out the minimum necessary to keep the universities ticking over until 1985. It envisaged continued freezing of a third of vacant posts, a worsening of the staff/student ratios and cuts in many services.

It had been prepared by the Higher Education Authority whose chairman, Mr Dominic O'Looghair, said that the college income would not be reached this year. Last year, the universities had a total income of IR£28m (£22m), this year, the income would only be IR£1m (£0.8m), whereas the authority had proposed IR£74m (£59m).

He warned that unless there was a radical change in policy, certain developments seemed possible. New buildings might be left empty for want of money to hire staff.

Planned new institutions might have to be "mothballed". Government expansion targets for student numbers might not be reached.

The authority, which directly funds the universities and other institutions, would have to look closely at all expenditure in order to be quite sure that it was not just desirable but unavoidable, he added.

The New Education Minister, Dr Martin O'Donoghue, did not hold out much prospect of greater state aid for the universities. He said that if all the projects at present proposed for the third level section were to be funded over the period 1983/87, the third level would absorb virtually the whole of the likely capital budget for educational services. It was patently obvious, therefore, that choices would have to be made and priorities established.

On the current expenditure side, there was a need to review all existing institutions. A better balance needed to be achieved between pay and non-pay costs. Given the limitations on overall expenditure, this could only be achieved through greater productivity and more effective organization of the work of the colleges.

Dr O'Donoghue did not spell out what type of productivity measures he had in mind. He did say, however, that the whole question of the way in which academic staff were deployed, and their utilization for teaching purposes, was one which could well repay study in depth.

There could be considerable scope for a fresh approach to arrangements for non-academic staff, he added.

On the revenue side, he said the colleges should explore the scope for greater financial support from private sources. There was growing appreciation in industrial and commercial sectors of the importance of education for the future workforce and this had reflected itself in improved links between educational and commercial bodies, he added.

High interest rates mean loans are ruled out

A student loan scheme has been ruled out, for the present, by the Republic's new Education Minister, Dr Martin O'Donoghue.

Although his predecessor, Mr John Boland, was considering such a scheme, the new minister has said there were problems in introducing loans at a time of high interest rates.

Dr O'Donoghue, a former professor of economics at Trinity College, Dublin, said the initial capital injection required to get a scheme off the ground would be high. If the state had to provide this capital, state expenditure would rise sharply for the first five or six years. It would take 13 or 14 years, even on the most favourable assumptions in regard to repayments, for receipts to match outgoings.

With interest rates at a high level, the burden of debts on the emerging

graduates would be very high and repayments would be difficult to meet, especially in the initial years and perhaps subsequently also as the graduate took on other responsibilities.

He added that some mix of direct grants to the institutions linked with maintenance grants to less well off students and a loan scheme operated through the banks may be found to be the most practicable way forward if a change were to be made.

His comments have been welcomed by the Union of Students in Ireland which has just launched a booklet opposing loans. The union is seeking an improvement in the existing grants scheme which it says is about one quarter of students. It expects a recently approved 25 per cent tuition fee rise will put higher education beyond the reach of many.

Zimbabwe gets veterinary faculty

from Stephen Taylor

SALISBURY

The University of Zimbabwe began its academic year with more students and a new faculty of veterinary science.

Professor Walter Kamba, who became the university's first black principal last September, said he was planning alterations to curricula to bring it in line with the needs of the developing nation.

With the population of Zimbabwe's only university having risen to almost 3,000 he also foreshadowed an end to the open-door policy of staff recruitment and a curbing of the authority of department heads.

Of the 1,020 students who registered in March for first year courses, 16 make up the first intake of the new veterinary science faculty which has been established with assistance from the department of tropical veterinary science at James Cook University in Queensland, Australia, and the University of Glasgow.

The creation of the faculty was recommended by Sir Alexander Robertson of Edinburgh University after a visit two years ago. In spite of the importance of livestock breeding to the agricultural industries, and to neighbouring black states, there is only one veterinary faculty south of Kenya and that is in South Africa.

A department of mining engineering is planned for next year and other new departments are being considered. All are consequences of relating the university to the needs of the country, Professor Kamba said.

There are others. "When I became principal it was to seek to effect changes which will make it an integral part of the life of the country - which it was not in the past."

A number of faculties are examining their curricula with a view to introducing changes.



Mr Walter Kamba: independent.

"Broadly speaking, what we are trying to do is examine the social consequences of what, say, an engineer does here as opposed to Europe and adjust the emphasis accordingly.

"Irrigation, for example, is an important engineering concept which is not adequately reflected in the western model curricula which we have been teaching," he said.

Another area in which change is likely is law. African customary law has recently been integrated into the conventional legal system in the setting up of village and community courts. Professor Kamba said a critical appraisal needs to be made of what kind of lawyers the country needs.

The department of urban planning is likely to be broadened to take in rural planning as well, reflecting the transformation in the countryside as the government pushes ahead with its land resettlement programme.

Professor Kamba said that the reorientation he has in mind for the university would require a commitment by its staff "to the people of Zimbabwe and their aspirations".

Past policy of recruiting the applicant with the best qualifications provided unfair competition for Zimbabweans and had given rise to a situation in which only 24 per cent of teaching staff were local nationals.

"I have given instructions that the university will employ non-Zimbabweans only if a Zimbabwean is not available and then only on limited contracts. This will in turn enable us to develop our own manpower."

Meanwhile he plans a shake-up in the running of departments. It is proposed that no head of faculty will be appointed but will serve on a rota basis.

"The structure was too autocratic," Professor Kamba explained. Decision making needs to be broadened to foster a spirit of corporateness.

It might appear that the running of the university is starting to reflect the principles of Mr Robert Mugabe's socialist government but Professor Kamba is confident that the relationship has not become too close.

"In my discussions with the government there has been clear recognition that it is in all of our interests for the university to maintain a substantial degree of independence. The government realizes that we should not be run as an arm of a ministry - but there must be close cooperation."

The long-awaited university bill, which will replace the body's independent charter and define the framework for its administration, is now expected to be presented in the next parliamentary session. That document should give a clearer indication of how autonomous the university will remain.

Cuts hit poor



University life: beyond reach?

One of America's elite universities claimed last week that the cuts in student loans and grants proposed by the Reagan administration had already begun to deter poorer applicants from seeking admission.

Mr William FitzSimmons, dean of admissions and financial aid at Harvard, said that while the number of applicants for Harvard and Radcliffe colleges remained high, there had been an "alarmining" fall in the number from less affluent families.

Three years ago nearly 26 per cent of applicants came from families whose parents had not attended college. This year the proportion had dropped to 15.8 per cent.

"It appears that less affluent students are beginning to select themselves out of the applicant pool before they learn of financial aid options that might have made it possible for them to attend Harvard and Radcliffe," Mr FitzSimmons said.

"This is unfortunate because we continue to be able to admit students regardless of financial need. About 65 per cent of the college's 6,500 students receive financial aid."

To encourage more students from less affluent families to apply, Harvard intends to launch a recruitment campaign and raise an additional \$41m for financial aid to undergraduates.

Biologists fear commerce's role

Five our North American editor from university presidents held a private "summit" meeting with industrial executives in California last week to try to resolve the confusion which surrounds the commercial development of biotechnology.

The meeting was organized by Dr Don Kennedy, President of Stanford University, which has initiated extensive licensing agreements under which private companies can exploit technological developments from the university's laboratories.

Also at the summit were the presidents of Harvard University, the Massachusetts Institute of Technology, the California Institute of Technology and the University of California. Industry was represented by executives from companies like Genentech, Applied Biosystems, Syntex and Cetus. All have invested heavily in biological research.

At the end of the three-day meeting a 10-page statement setting out some of the basic principles which the participants said, should govern relations between universities and industry. Mr Robert Rosengweig, Stanford's vice president, said the statement was not binding but would be taken back to the participating universities for discussion.

A key principle enunciated in the document was that co-operation between university researchers and commercial organizations "should not promote a degree of secrecy that will hamper the progress of science, impair the education of students, interfere with the choice by faculty

members of the scientific questions or lines or inquiry they pursue, or divert the energies of faculty members from their primary obligations to the teaching profession."

According to the document, universities should give companies exclusive patents on research discoveries only when it was necessary to ensure "prompt vigorous development" of the patent. It would be wiser for universities to refuse to grant patents to companies in which staff members had a significant financial interest.

In addition, universities should publicize the details of research contracts with industry and enable academic staff to ensure that the agreements were "consistent with essential academic values."

Participants at the meeting acknowledged that the proposals were rudimentary and general, but claimed that the "summit" had increased industrial awareness of the values of academic research, particularly the need to maintain a free flow of research findings among scientists.

Dr Kennedy decided to call the meeting after mounting concern among academics about the way individual universities were organizing their relations with industry.

At MIT last year the biology department was divided over a proposal to establish links with the private \$127m Whitehead Institute for Biomedical Research. There was also controversy at Harvard over a \$5m genetics grant from Du Pont.

In California, too, there has been a sometimes acrimonious debate over the proliferation of agreements between university biologists and high technology companies seeking a quick profit from new genetic manipulation techniques.

Last month the state's fair political practices commission ruled that future university researchers would come under a conflict-of-interest regulation requiring public servants to disclose their financial interest in particular research projects.

The state's move followed several highly-publicized cases of university biologists developing close financial interests in the exploitation of their research findings. Professor Herbert Boyer at the University of California's San Francisco campus became a millionaire last year by selling some of his original stock in Genentech.

More recently Professor Raymond Valentine of California's Davis campus helped to establish a private research company called Calgene which, some critics claim, poached resources from the university.

The extent of campus anxiety about the encroachment of private enterprises like Calgene became apparent last month in a leaked memorandum from Mr Emmanuel Epstein, professor of plant nutrition at Davis.

"The memo claimed scientists at the campus who had new ideas about plant biology had been inhibited from discussing them with colleagues lest they fall into the hands of the 'two' private research companies which had been established at Davis with the help of some academics."

More recently Professor Raymond Valentine of California's Davis campus helped to establish a private research company called Calgene which, some critics claim, poached resources from the university.

The extent of campus anxiety about the encroachment of private enterprises like Calgene became apparent last month in a leaked memorandum from Mr Emmanuel Epstein, professor of plant nutrition at Davis.

"The memo claimed scientists at the campus who had new ideas about plant biology had been inhibited from discussing them with colleagues lest they fall into the hands of the 'two' private research companies which had been established at Davis with the help of some academics."

More recently Professor Raymond Valentine of California's Davis campus helped to establish a private research company called Calgene which, some critics claim, poached resources from the university.

The extent of campus anxiety about the encroachment of private enterprises like Calgene became apparent last month in a leaked memorandum from Mr Emmanuel Epstein, professor of plant nutrition at Davis.

"The memo claimed scientists at the campus who had new ideas about plant biology had been inhibited from discussing them with colleagues lest they fall into the hands of the 'two' private research companies which had been established at Davis with the help of some academics."

Time up for eternal student

The West Berlin government is preparing to crack down on the "eternal student", who has always been a feature of German academic life. The city's universities and other centres of higher education have been asked to supply information on undergraduates enrolled for more than eight years.

At the Free University alone more than 10,000 students, about 22 per cent of the total, have notified up at least 17 terms. The city government calculates that by weeding out the "unserious" students it could save millions of marks. And the government, like all German public authorities is in a thrifty mood.

But educationists doubt whether it is worth the trouble. Since 1975 university budgets are not assessed by total student numbers, but by the

number of new entrants and their average length of course. Arts courses generally last four to five years, and natural science and medical courses up to seven years. The universities say the "eternal" students are no great financial burden and cannot be blamed for causing overcrowding. They are conspicuous only by their absence. They stay on the roll to enjoy the perks: a student's pass, cheap health insurance and travel.

Even without the eternal students, the Berlin universities have 35 per cent more undergraduates than places.

Students on grants graduate on average one term earlier than self-supporting students. They are also less likely to switch courses or drop out, according to recent research.

South African research bottom of league

from Craig Charney

JOHANNESBURG

Basic scientific research is declining at South African universities, threatening economic progress and academic standards, according to a recent study.

The report attributed the loss of momentum to a drop in funding, research interest and numbers of science graduates. It also found that the amount of scientific work at the country's black and Afrikaans medium white universities was strikingly low compared to the English-medium institutions.

"It appears clear that basic research in South Africa is not fundamentally sound," concluded the study's author, Professor E. C. Reynhardt of the University of South Africa.

In his work, he tabulated articles on the natural sciences, medicine, agriculture, technology, and behavioural sciences from the 3,000 journals indexed in the science citation index by nationality.

He found that the number of articles published annually by South African scientists almost trebled between 1967 and 1974. However, the

Dissident doctor arrested

Czech security police have raided the Prague flat of a leading dissident, Dr Ladislav Hejdicak while he was running a weekly unofficial seminar.

The police arrested Dr Hejdicak, his wife and three daughters together with a number of other participants, and held them for 20 hours. They were interrogated and warned not to organize more seminars, according to emigre sources in Sweden.

The raid comes just a couple of months after an appeal by Dr Hejdicak to the West urging academics to continue visits to Prague to lecture at his seminars despite "discomforts to us and them" inflicted by security police.

Police have also released four more of the 36 dissidents arrested in a series of dawn swoops in April 1981. A historian, a journalist, and a face the general charge of subverting the republic, and those released have been warned not to talk to journalists.

Ironically, the anti-corruption purge that brought a 20-year prison sentence and confiscation for Mr Popov, sentences of 10-18 years for three other officials, and the apparent expulsion from the Party of senior central committee member Michro Spasov, may have been connected with the introduction of the new mechanism.

Top scientist loses face in party purge

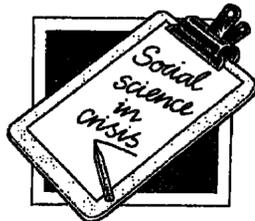
Dr Julia Vassileva-Popova, the founder and hostess of the triennial Yarna Biophysics Symposia, has been cited in a major corruption scandal involving several leading Bulgarian government and Communist Party officials.

No accusations have been brought against the doctor but, following the conviction of her husband, former diplomat Zhivko Popov two weeks ago on charges of embezzlement, she and her daughter will lose personal property under a confiscation order of the supreme court against her husband's estate. This is unusual in Bulgaria, where relatives are not normally assumed *prima facie* to be involved in the derelictions of their kinsfolk.

Dr Vassileva-Popova has always tried to use her husband's international career to benefit Bulgarian science. Some years ago, when he was attached to the Bulgarian embassy in London, she used the opportunity to do research at Imperial College. During his latest appointment to Czechoslovakia, however, she remained in Bulgaria, as director of the Institute of Rapid Spectroscopy and Biophysical Investigations of the Bulgarian Academy of Science.

Her main interests were the training of a younger school of biophysicists and developing a range of new, commercially profitable, spectroscopy devices. She anticipated the new economic mechanism, which came into operation on January 1, according to which not only are market-orientated bonuses paid for productivity, but investment research funds will be available to enterprises which have shown the highest cost effectiveness.

Ironically, the anti-corruption purge that brought a 20-year prison sentence and confiscation for Mr Popov, sentences of 10-18 years for three other officials, and the apparent expulsion from the Party of senior central committee member Michro Spasov, may have been connected with the introduction of the new mechanism.



Social science is under siege on both sides of the Atlantic. Peter David looks at America and Donald Fields at the Nordic countries

Lysenko's odd ally in the White House

There are striking similarities between the politics of social science funding in the United States and the United Kingdom. Like Britain the US filters much government aid for basic social research through a semi-independent "buffer": the National Science Foundation (NSF).

Like their British counterparts also, American social scientists have suffered disproportionate cuts at the hands of an administration which makes no secret of its aversion to social science. And in America as in Britain, the conflict over research funding has been perceived by social science as a challenge not only to its financial health but also to its academic legitimacy.

But there are differences. Unlike the SSRC, which is very much the vulnerable younger cousin of the "hard" research councils, American social research is funded directly through the multidisciplinary NSF. Its inclusion with the natural sciences gives social science a measure of institutional protection and confers on it a scientific dignity which can help to ward off unfriendly administrations.

The value of this protection was felt keenly last year when the incoming Reagan administration proposed cutting the social and economic research share of the foundation budget by a staggering 75 per cent on the grounds that social science was "relatively less important to the economy".

A consortium of social science associations was able to persuade Congress to reduce the cut to 26 per cent by casting the issue as one of the independence of science. And that was possible only because the natural science establishment in the NSF was affronted - and perhaps frightened - by the victimization of their social science colleagues. Dr John Slaughter, the foundation's director, told Congress that social sciences played a critical, "sometimes pre-eminent" role in solving the nation's problems.

Of course the NSF, like the SSRC, is not a buffer made of steel. Its budget, and the allocation of funds among the disciplinary directorates, is the product of complex negotiations in which the views of its own bureaucracy seldom prevail against

those of the presidentially-appointed National Science Board and the White House Office of Management and Budget.

The Buffer is not made of cotton wool either. Unlike Britain, the American budget process involves detailed parliamentary scrutiny of science funding. At least two committees in each house of Congress pick through the president's spending plans for the NSF and they are all lobbied by the academic community.

The administration succeeded in inflicting serious damage on social science last year, not only through its spending cut but also by shifting the emphasis of the big medical research agencies away from social scientific and towards biomedical approaches to mental illness. Paradoxically, though, its victory there may rebound to damage the White House this year.

Alarmed by congressional charges of "Lysenkoism," the administration has proposed no further cuts in social research in its 1983 NSF budget. But last year's move had so galvanized the social science community that Congress has now been exposed to insistent argument that the social science component of NSF spending is so valuable that some of the cuts should be restored. To the chagrin of the office, the house science and technology committee has voted to restore social science funding to its 1980 level, which would mean virtually doubling the allocation suggested by the president.

Why should Congress turn out to be so supportive? One reason advanced by champions of social science is that the administration erred last year in proposing such an unfairly large cut that the issue became one of almost constitutional significance. Congress, which at times can be fustian about constitutional proprieties, disapproved of the White House imposing a political or ideological decision on a supposedly neutral scientific foundation. A slower chiselling away of the social science budget might have attracted less attention.

Another reason is that the social science community was able to produce a convincing argument that NSF support for its disciplines was important, academically and served the national interests and served departmental needs. In 1980 government departments spent more than 780m on social science research, with the NSF accounting for only \$50m.

The departments of health, agriculture and defence each spent more on social science than the NSF. Yet the NSF was virtually the only source of federal support for basic, scholar-initiated and disinterested research. Some disciplines, like economics, depended on the foundation for 70 per cent of federally funded research in colleges and universities. Others, like the history and philosophy of science, were nearer 90 per cent.

Even more importantly, Congress was told - and appears to have accepted - that cutting funds would take the "science" out of social science. Data banks, econometric surveys and computer resources would be damaged leaving theoretical social science to sprout and sprout without a firm empirical base.

If social sciences research survives the Reagan challenge it will be due partly to structural features of the American research scene which the SSRC can hardly emulate: close institutional links with the natural sciences and real parliamentary influence over and interest in science policy. But it will also be due to the political and "won" the intellectual argument in favour of government support for disinterested basic social research. British social science does not have a Congressional "win" for its team, but there is no reason why it should not capture Lord Rothschild's



Armoured cars and jeeps outside the Polish Academy of Science. Three hundred staff and students were arrested.

How Operation Falcon preyed on Poland

Operation Falcon, the "normalization" of Polish academic life under martial law, has not taken place unopposed. The clampdown on normal channels of communication has made it difficult to follow in detail the campaign and resistance of the academic community but, documents reaching the West are making it possible to trace the course of events.

Thousands of prominent Solidarity activists in the academic professions were interned under the emergency regulations, while others went into hiding. There were protest strikes in several universities and research institutes. Solidarity, driven underground into regional cells, called on its members to refuse to sign the new "verification" document, pledging loyalty to the state and resigning from Solidarity.

One appeal, signed by the teachers and lecturers' solidarity group in Wrocław, called the pledge a "charter of servility".

The appeal did not go unheard. Among those who responded was Roman Skawinski, a lecturer at the Wrocław medical academy who gave the courses in Marxist sociology and denouncing the takeover as a "great national tragedy" and arguing that General Jaruzelski's junta was not the only alternative to a Soviet takeover. For refusing to sign, he was expelled from the Communist Party and imprisoned. At the same time a spokesman for the Polish embassy in Britain was telling a delegation from the logic colloquium that he had heard nothing of any such oath being imposed on academics.

New regulations have been imposed on higher education limiting contacts with foreign colleagues. All existing travel applications are reviewed taking into account the academic cost-effectiveness of the trip and whether or not the applicant was a fit person to "represent the political interests of the Polish People's Republic".

Priorities is to be given to participation in joint research which can benefit the Polish economy, to visit to prestigious institutions abroad, to invitations to chair international symposia, and to people holding positions on international academic bodies.

Visas for students completing their higher education in the West are to be held up, as are those for academics wishing merely to consult archive sources abroad (as opposed to helping) international conferences. In particular, no one who has travelled abroad to attend a conference or participated in activities "harmful to the state" is to be allowed to go abroad.

For such persons possession of a foreign passport can prove detrimental. One young scholar, the

The National Union of Students will see significant changes with the election of Neil Stewart as national president.

A supporter of the "soft left" of the Labour Party, he has broken the 15 year domination of the NUS by the Left Alliance and its predecessor, the Broad Left, with a decisive majority. Six other Labour students have been elected to the national executive with only four Left Alliance members.

Mr Stewart's election was virtually secured by his successful speech on the first night of the conference for compulsory cross campus ballots to elect conference delegates. "I believe the Left over the past five or six years made a major strategic mistake in allowing itself to be portrayed as undemocratic. Colleges with the ballot system are always the least likely to disaffiliate because they stay politically groups from becoming, lazy. It forces them to argue their position on NUS and say what it's doing."

The major argument of the anti-NUS people was always the lack of cross campus ballots. They also got a lot of mileage out of the fact that student leaders were in the Communist Party. Given that Labour students now have the leadership, that will become a non issue as well.

Mr Stewart sees his election not as a lurch neither to left nor right, but as a change in style. "There won't be massive new policy statements, but we'll be mobilizing people and issues. I think a lot of oppositionist attitudes taken by the executive in the past will be dropped for more constructive dialogue with, for example, the women's movement or the gay movement. There are a number of obvious major movements, such as the anti-nuclear movement which operate within NUS, and we have got to be responsive to them."

"Hopefully the people involved in these things will also turn their energies to major NUS campaigns such as majors - that's what we expect in return."

Mr Stewart is at present Scottish chairperson of NUS, and at the recent NUS (Scotland) conference, a motion backing women's autonomy was passed (five years after a similar motion was passed by NUS UK) enabling women to meet independently before arguing their cases in students forums.

He suspects one reason for the labour victories at NUS is student approval of Michael Foot's stance on

Leader who'll listen to the members

NUS is set for a change in style. Olga Wojtas talks to Neil Stewart about his plans for the movement.

Neil Stewart is anxious to portray students 'not as idle layabouts'



nuclear disarmament and unemployment. "And partly because of the crisis about what to do in relation to the grants campaign."

On grants, the point constantly stressed by Mr Stewart which has not been echoed so strongly by the present national executive, is that grants are a right not a privilege because students' parents have paid for them.

"Unlike America, Sweden or the continent, it's part of the social contract as much as pensions, dole money or the health service. The Government has succeeded in making the debate on grants part of the debate on wages, when it's quite clearly a state benefit."

"I reject any ideas Keith Joseph" has on student loans or partial loans although I'm increasingly convinced that the Government could seriously be looking at a partial loans system, which they will tempt people

into by eroding the value of the student grant. I hope this idea will be nipped in the bud both on principle and practicalities, and that the Government in the last 18 months of its term of office would be susceptible to democratic pressure."

Mr Stewart has been coordinating a spectacular Scottish grants campaign, including a 10,000 strong demonstration in Glasgow some weeks ago which he feels was instrumental in making the Hillhead byelection candidates accept education as a major issue. The demonstration included large contingents from disaffiliated institutions. "We obviously created massive student unity even if we couldn't achieve student unionism," he says.

At present, five of Scotland's eight universities are not affiliated to the union, and Mr Stewart hopes they "may be encouraged into the fold" if

people feel the union in London understands them." Certainly, his first two congratulatory telegrams were from Glasgow University's SCR and Dundee's NUS Society, both in disaffiliated institutions.

One largely unreported point is that Neil Stewart is only the second Scot to achieve the presidency in the NUS's 60 years: the first was Sir Ivion MacAdam, co-founder of the union, who held office in 1922-23.

Mr Stewart's stance on campaigning was also one of his major election issues. "I think you can break the stagnation of the present debate which says either occupations or non-violent protest, drawing on the experience on the Anti-Apartheid League, the anti-nuclear movement and so on."

Direct action within institutions, when it is well organized and has

clear demands, can be worthwhile, he says, citing recent college occupations in Scotland against the grants cuts after which several principals wrote to the Scottish Secretary criticizing the Government cut. But Neil Stewart believes such campaigns should be more outward looking, to bring the issues to the attention of the general public.

"At the same time, I believe the union's capacity to lobby at a national level is hopelessly inadequate in that the current leadership has been isolated from political parties. Although a member of the Labour Party, I would intend to preserve the integrity of NUS and make our case to all political parties."

But if education is to be seen as a burning issue by politicians, says Mr Stewart, it must be seen as giving "all people a new deal." And if universities are to defend themselves successfully against the cuts, they "must not retreat into the elitism of just servicing 18-year-olds. Even if they just work out schemes, even if they don't have the money to put them into practice, they've got to look at people made redundant, pensioners, distance learning, and also a demand for higher education in slightly smaller doses than a four year degree course."

Mr Stewart is also anxious to forge stronger links between NUS and the trade unions, which he sees as simultaneously broadening unions' horizons. "We've got to try to get the trade unions involved in things like youth unemployment and women's rights. If unions are going to continue to have mass support in Britain, they've got to show they're relevant to a wider social group than their members."

Scotland again has been leading the way on this, he says, with the STUC strongly backing the Jobs for Youth campaign in which the TUC seems to have run out of steam.

Neil Stewart feels his experience as Scottish chairman has been an invaluable preparation for the national presidency, particularly as he claims the Government has been using the Scottish Education Department to play a "hawkish role" in attempts to erode grants for transfer and repeat years, and cut postgraduate awards.

Sir Ivion MacAdam founded NUS; 60 years later his successor is confident he can "get across the true image of students, who for too long have been seen as 'idle layabouts'."

Cold comfort up north

The concept of "social sciences" varies markedly across the Nordic countries but the interpretation is generally broader than that in Britain.

In Sweden six universities and about 15 diploma-giving colleges are receiving Kr221m (£21m) of general government money for teaching social sciences this fiscal year, rising to Kr242m (£23m) in 1982/83. The respective increase for social science research in these institutions will be from Kr124m (£12m) to Kr136m (£13m). The expansion narrowly exceeds the 9 per cent inflation forecast for 1982.

The broad sweep of social sciences envelops public administration, business administration and personnel management. As the university curriculum becomes more career-oriented, the existing seven social science courses are being streamlined to three. The lion's share of the increased expenditure is going towards staff and equipment.

Besides the state, research foundations are doing some of the social science funding, two-thirds of which is absorbed by the universities. Private industry has surprisingly neglected giving money to business administration in favour of technology and medical sciences.

Away from Sweden, decisions on the share-out of funds between different disciplines are much less centralized. In Denmark the best indicator of the relative importance of the social sciences is that they took 12 per cent of national research and development outlays, totalling Kr3,367m (£336m) in 1979, when 800 "full-time equivalents" were working in this field in universities, institutes and research foundations. Under Danish practice, 40 per cent of the line spent by a member of university staff can go on research.

In a sluggish economy in which only engineering and technology have escaped the public spending axe there is acute pressure to squeeze social sciences. A steep increase in unemployment has been recorded among social scientists teaching senior school and vocational pupils, but these going into public administration have been virtually unaffected.

The Finnish definition of this field extends to economics, law, sociology and related sciences. Twenty-eight per cent of first-year students admitted to Finnish universities in 1980 were covered by this broad sweep, which absorbed 7 per cent of total research and development funds

(Mk1, 748m), (£215m) in 1979.

In the 1970s the social sciences retreated relatively as research moved from "society orientation" to "technology orientation". As attempts are initiated to find a balance between the two priorities, they may enjoy something of a revival.

The expenditure of the Academy of Finland, which absorbs 8.5 per cent of state research funds, is instructive. Here, a virtually constant 15 per cent of rapidly expanding outlays are going on the social sciences. Eighty-five of the 446 academy-backed researchers in 1982 are working on projects extending from one to three years.

Norway, by contrast, is now experiencing a serious shortage of technologists to exploit its offshore sector. This combined with government economies seems bound to scythe into social sciences. Definitions of what constitutes social science vary from university to university, with Oslo containing itself to social economy, psychology, sociology, political sciences and pedagogics but some others encompassing law and business administration as well. The contribution to social science teaching of the regional colleges occupying the academic middle ground between school and university should not be overlooked.

There have been sharp changes within the social sciences over the last decade, with drops in the numbers of people reading social economics and education, a breath-taking expansion in law, political science and residual subjects, and a growing trend in business administration. Sociology is at a virtual standstill.

The total budget for Norwegian universities has been increased by 2 per cent in real terms every year, but the social sciences have started to lag well behind.

In 1981 government research and development funding in Norway totalled Kr7,426m (£742m), of which an estimated 8 per cent went to the category "health and social conditions". The government was responsible for 60 per cent of research in Norway in 1979; divided 25/35 between research councils on one hand and universities and technical colleges on the other.

Besides the four countries' governments, the inter-governmental organization called the Nordic Council (also extending to Iceland) is a catalyst for some research in the region. But only a minuscule share of the Kr35m (£3.5m) earmarked for this purpose in 1982 goes to social sciences.

Alarmed by congressional charges of "Lysenkoism," the administration has proposed no further cuts in social research in its 1983 NSF budget. But last year's move had so galvanized the social science community that Congress has now been exposed to insistent argument that the social science component of NSF spending is so valuable that some of the cuts should be restored. To the chagrin of the office, the house science and technology committee has voted to restore social science funding to its 1980 level, which would mean virtually doubling the allocation suggested by the president.

Why should Congress turn out to be so supportive? One reason advanced by champions of social science is that the administration erred last year in proposing such an unfairly large cut that the issue became one of almost constitutional significance. Congress, which at times can be fustian about constitutional proprieties, disapproved of the White House imposing a political or ideological decision on a supposedly neutral scientific foundation. A slower chiselling away of the social science budget might have attracted less attention.

Another reason is that the social science community was able to produce a convincing argument that NSF support for its disciplines was important, academically and served the national interests and served departmental needs. In 1980 government departments spent more than 780m on social science research, with the NSF accounting for only \$50m.

The departments of health, agriculture and defence each spent more on social science than the NSF. Yet the NSF was virtually the only source of federal support for basic, scholar-initiated and disinterested research. Some disciplines, like economics, depended on the foundation for 70 per cent of federally funded research in colleges and universities. Others, like the history and philosophy of science, were nearer 90 per cent.

Even more importantly, Congress was told - and appears to have accepted - that cutting funds would take the "science" out of social science. Data banks, econometric surveys and computer resources would be damaged leaving theoretical social science to sprout and sprout without a firm empirical base.

If social sciences research survives the Reagan challenge it will be due partly to structural features of the American research scene which the SSRC can hardly emulate: close institutional links with the natural sciences and real parliamentary influence over and interest in science policy. But it will also be due to the political and "won" the intellectual argument in favour of government support for disinterested basic social research. British social science does not have a Congressional "win" for its team, but there is no reason why it should not capture Lord Rothschild's

Radical change of the university system was top of the list of urgent reforms when the PASOK government took office in Greece late last year.

But change is not coming fast enough for hunger-striking who maintain a 24-hour vigil outside the ministry of education in Athens. They are Greeks from overseas who have failed to gain entrance to the universities in a special examination.

Only 10 per cent of them were successful and the rate for potential students trying to enter from schools is not much better.

The minister in charge of the universities, Professor Lianos, is a professor of engineering trained at Imperial College who taught for nearly 20 years in the US before and during the dictatorship.

The constitution guarantees the universities independence from state control but although PASOK is not a revolutionary party its most effective election promise was the word "Change". Every year pressure grows for the only post-18 education available offering prestige or prospects.

The minister's first task is to get more students to choose non-university post-18 (vocational) education. It would relieve pressure on the universities and provide badly needed personnel for a wide range of social services and technological fields, including microprocessors, agricultural modernization, and tourism.

However vocational higher education was held in a state of complete collapse, underfunded in plant, uninteresting in teaching, low in status and narrow in content. The drop-out rate was high. There was a firm government commitment, therefore, to improve teaching quality, course content, and facilities.

The new higher education bill about to be presented to Parliament would also require Greek industry and services, public and private, to hire a substantial quota of all future staff from those with qualifications in the post-18 vocational sector. The government is counting on job prospects as the carrot.

The same upgrading is necessary in 15-18 vocational education. An additional problem is that the 15 to 18 sector is rigidly divided into grammar and vocational schooling with a 15-plus examination deciding which students go to the grammar school. Those who fail to get to the grammar school feel they have failed.

Improvement in vocational schooling is to rely not only on better finance but on consumer pressure for more comprehensive education. Comprehensive reform in Greece has been a pre-freighting and positive exercise. The primary sector (six to twelve) is comprehensive; so too now is the 12 to 15 gymnasium, the 12-plus sector having been ended by the previous conservative government. Sixty per cent stay on to tertiary schooling (although this figure masks a significant drop-out rate after elementary education in rural areas, despite a legal requirement to remain to 15).

Professor Lianos said PASOK's commitment to abolish 15-plus selection was done "within a few days" of the election victory. This was seemingly confirmed at a highly selective secondary school, an ex-royal-education boys' direct-grant-school equivalent with an entrance examination giving it roughly the top 5 per cent of sure enough. It was already taking in girls, and from next September would not be selecting. Parents will apply as always, but a lottery will decide admissions at each school.

Pressure on vocational tertiary schools to provide a university stream is anticipated and already being encouraged by the government. The curriculum is in any case centrally decided, the syllabus the same in all schools, the only assessment being the two nationally set university exams at 17 and 18.

The Greeks bank on university reform relieving them from the national exam stranglehold. This means dismantling the power of the professors, for universities are still the nineteenth century establishments run on the old German model: professorial lectures to large numbers, end-of-course examinations to determine awards of degrees, and little else in between.

The problems are not facilities or the qual-

Bloodless revolution in Greece's universities

Sweeping reforms are necessary but are hampered by the constitution, writes Caroline Benn

They are, after all, part of the independent universities, and will form part of the body in each university department that ratifies appointments to the department's staff, and in the case of unresolved conflict, makes the final decision.

To carry out the evaluation process for all university appointments, the Education Bill is creating a new Greek Academy of 100 places (to be filled by university staff). It is also creating a new body called the Higher Education Council made up of the rectors of the universities, representatives of all political parties, and several other groups.

Remembering university "independence", the council can "decide" nothing, but it is unlikely it will fail to be powerful, since its task will be to recommend on all university finances and expansion, including the possibility of new universities (or outpost campus systems). In effect, it is the body that will make the universities accountable to the community by its power to recommend government expenditure.

The last leg of university reform will be overhauling the two national examinations taken at 17 and 18, not just to free the schools, but to end the pernicious "Frontier" system, a network of back street cram schools which secondary age students attend after school for three hours, or in the evenings up to 10 pm, year after year.

Anyone who is a serious university candidate must go, and this applies whether they are in the prestigious grammar school or the even more prestigious private sector. The private sector, which has about 8 per cent of all Greek students, is dominated by the "foreign" schools: Italian Schools, French Schools, English Schools, American Schools, etc. By law no Greeks are supposed to be admitted except with those in the foreign service or whose one parent is not Greek, but the law is flouted, particularly in respect of the American School, the most elite.

The university bills also aims to end the division between training primary school teachers in narrow vocational schools, while secondary school staff qualify simply by having a university degree and receive no pedagogical education of any kind. All teacher education will in future be brought together in new education departments to be created at each university.

Radical change of the university system was top of the list of urgent reforms when the PASOK government took office in Greece late last year.

But change is not coming fast enough for hunger-striking who maintain a 24-hour vigil outside the ministry of education in Athens. They are Greeks from overseas who have failed to gain entrance to the universities in a special examination.

Only 10 per cent of them were successful and the rate for potential students trying to enter from schools is not much better.

The minister in charge of the universities, Professor Lianos, is a professor of engineering trained at Imperial College who taught for nearly 20 years in the US before and during the dictatorship.

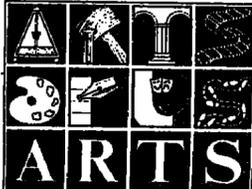
The constitution guarantees the universities independence from state control but although PASOK is not a revolutionary party its most effective election promise was the word "Change". Every year pressure grows for the only post-18 education available offering prestige or prospects.

The minister's first task is to get more students to choose non-university post-18 (vocational) education. It would relieve pressure on the universities and provide badly needed personnel for a wide range of social services and technological fields, including microprocessors, agricultural modernization, and tourism.

However vocational higher education was held in a state of complete collapse, underfunded in plant, uninteresting in teaching, low in status and narrow in content. The drop-out rate was high. There was a firm government commitment, therefore, to improve teaching quality, course content, and facilities.

The new higher education bill about to be presented to Parliament would also require Greek industry and services, public and private, to hire a substantial quota of all future staff from those with qualifications in the post-18 vocational sector. The government is counting on job prospects as the carrot.

The same upgrading is necessary in 15-18 vocational education. An additional problem is that the 15 to 18 sector is rigidly divided into grammar and vocational schooling with a 15-plus examination deciding which students go to the grammar school. Those who fail to get to the grammar school feel they have failed.



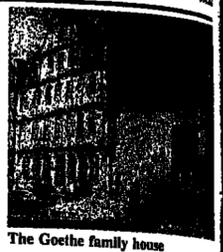
ROSEMARY ASHTON reviews an exhibition to commemorate the 150th anniversary of Goethe's death. PHILIP SIMPSON discusses the British Film Institute's policy on film education.

An art or a medium?

Underlying some of the irritable exchanges published about current film theory is often the question of whether film is an art or a medium and it has bedevilled film theory from the outset: treating film as an art was bound to be suspect if "art" implied that a film was chiefly the conception of a single individual. The interest in, say *Double Indemnity* and *The Seven Year Itch* comes as much from the genre of the first and the star of the second as it does from the director of both, and even auteurship theory in film was an attempt to ask how we could conceptualize an individual's contribution to film rather than celebrate its presence. To regard film unproblematically as a medium though, brings its own difficulties. Sitting in the National Film Theatre during a recent season of prison movies you could feel the audience's irritation as Robert Redford in *Brubaker* played the central role, based on prison reformer Thomas Merton, as another golden-haired WASP hero. As a medium to explore prison reform the film evaded all the important questions. Some versions of film as a political medium are equally unsatisfactory. Finding a film's politics in its overt message results in the celebration of films like *The China Syndrome*. But what that film says about nuclear power seems very simple in comparison with the film's oblique and subtle treatment of the whole television structures our principal means of access to knowledge about social disasters. Theorists of film and television have tried to avoid the dichotomy between art or medium through stress on their objects of study as "specific signifying practices", attempting by the phrase to indicate that a series of systems of meaning are in the process of production and articulation through the deployment of codes, some of which are unique to television or to film. But in the institutional locations of film and television studies, the ambiguity has remained. One polytechnic offers a film course along with the study of design or painting in a syllabus for the history of art; another locates film alongside television, the press and advertising in a media studies course. Most of the lectureships established as a result of the British Film Institute's higher education policy were in university departments allied to the arts or the humanities, and only the lectureship at Stirling has developed as part of a media studies

The last universal man

The compilers of a British exhibition commemorating the one hundred and fiftieth anniversary of Goethe's death must face two almost insuperable problems. First, how can they hope, with limited space at their command, to do visual justice to the long and varied career of the last great "universal man", the poet, dramatist, botanist, geologist, meteorologist, statesman, and lover? Second, what can they do to make Goethe known, as distinct from merely known of, to an English public which has remained stubbornly disinclined to read and appreciate his works? The present exhibition at the Goethe Institute in London attempts to show us something of Goethe's variety as a writer, though the main emphasis is on the events of his life, particularly his love affairs. One of the exhibition's strengths is its large collection of drawings by Goethe, who once thought his vocation lay in the visual arts, and who was a sketcher all his life. Here we have, mostly in photographs or facsimile, a range of drawings which comment eloquently on his travels, his writings, and his loves. Perhaps the most interesting of them are an economic, a suggestive sketch of the Broken by moonlight, and an almost Blakean pencil drawing of the Earth Spirit in *Faust*. Of the many portraits of Goethe by other artists on show, Tischbein's back view of the poet looking out of a window in Rome in 1787 is particularly pleasing. The woman Goethe loved are well represented too. For a fortunate chance a lock of Goethe's hair can be placed beside one of Lotte Buff's (Lotte was the model for Charlotte in *The Sorrows of Young Werther*). Both items are preserved in English collections: Lotte's hair, and also a cross and a ring given to her by Goethe, were presented to King's College, London by Mrs Frida Mond, and Goethe's hair found its way to Oxford, where it is now preserved. Goethe's fortunes in, and connections with, Britain are also well documented here. The organizers have rightly emphasized the extraordinary reception of *Werther*: here are several sentimental illustrations to the book; a notice from the *Gentleman's Magazine* of November 1784 reporting the suicide of a young lady who had a copy of the novel under her pillow; a tea-set sporting scenes from *Werther*; and a solid Wedgwood teapot depicting Charlotte at Werther's tomb (this last was a popular subject with artists, though it has no counterpart in the novel). Perhaps space could have been found here for Thackeray's humorous poem about Charlotte cutting bread and butter, especially as Thackeray is elsewhere represented in the exhibition (he visited Goethe in 1830). Carlyle, so influential in the importation of German into English through his translation of the two *Wilhelm Meister* novels and his proselytizing essays in the *Edinburgh Review*, is less prominent than he deserves to be. A little manuscript poem to Jane Carlyle is included, but we get very little sense of the warm correspondence between Goethe and the Carlyles. Neither is G. H. Lewes represented, though he wrote, with George Eliot, the first biography of Goethe in English. One criticism of the exhibition, however, must be that the exhibits, particularly the books and manuscripts, are displayed in a rather



The Goethe family house

haphazard manner - for example the poem to Jane Carlyle is in a different room from the Carlyles. More important still, the view without a catalogue is completely a loss. There is no running commentary to accompany the items, indeed no description at all beside some of them, including most of Goethe's own drawings. For an exhibition which aims to interest the non-specialist, this is puzzling and discouraging. The exhibition is well seen, but prospective visitors should be prepared to pay £2.95 for the handsome catalogue which also will make sense of it.

Rosemary Ashton
The author is lecturer in English at University College London.

The exhibition runs at the Goethe Institute until April 22, then at the Bodleian Library (May 2-30), Lambeth Palace (June 8-July 9), York (July 19-August 7), Manchester (August 14-September 18), Glasgow (October 2-29) and Norwich (November 4-December 4).



Demons attacking boy yogi from *In the Image of Man* at London's Hayward Gallery until June 13. The exhibition gives a good introduction to the art of the sub-continent over the past 2,000 years. The captions to the paintings and sculptures are deliberately laid out but the catalogue (at £5.95) is well worth buying to explain the religious and cultural background in the exhibition thoroughly.

Philip Simpson
The author is head of education at the British Film Institute.

Tina Modotti, who worked in Mexico in the years after the revolution. Until May 2, Crawford Centre for the Arts, University of St Andrews. Seven Poets, paintings and drawings of seven Scottish writers by Alexander Moffat, who teaches at Glasgow School of Art. Until May 3, Museum of Mankind, London. Paintings by Australian aborigines. Until May 16, Scottish National Gallery, Edinburgh. *Hell*, a series of 10 lithographs. Until May 22, Bingham Art Gallery, *Leaves Never Grow on Trees*, thirty-four prints from Max Ernst's *Histoire Naturelle*. Until May 30, Bethnal Green Museum of Childhood, London. Indian playing cards from the V&A's collection.

FORTHCOMING EXHIBITIONS
Saturday April 10 until May 23, Feres Art Gallery, Kingston upon Hull. *The Voyage of Life: Sijo Imagery in Art, Literature and Life*.
Saturday April 10, Museum of British Involvement. Photographs by Tom Learmouth.
Until May 2, Whitechapel Art Gallery, London. Paintings and books by Anselm Kiefer and paintings and photographs by Frida Kahlo and

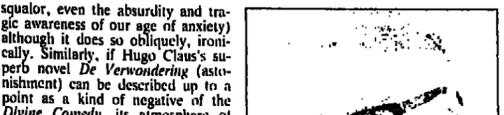
Library, London. *The Art of the Book in India: a historical survey*.
Wednesday April 21 until August 15, Victoria and Albert Museum, London. *The Indian Heritage: Court Life and Arts under Mughal Rule*.
Saturday April 24 until June 27, Leicestershire Museum and Art Gallery, New Walk, Leicester. *Royal Academy Diploma Works 1921-1981*. Includes many leading British artists and celebrates the jubilee of Leicester University.
Monday April 26 until May 22, Norwich School of Art. A celebration of the work of the school which was founded in 1845, includes paintings by Alfred Munnings and Lucien Freud, and Albert Mays, London. Indian landscape and people through the eyes of British artists through the century.
Wednesday April 28 until May 15, Seven Dials Gallery, Earlham Street, London WC2. *St Martin's Painters*. Exhibits by staff of the painting department at St Martin's School of Art.
Thursday April 29 until May 14, Dixon Gallery, University of London. *Just Off Russell Square*. Work by the Institute's art and design students.
Friday April 30 until June 11, Goethe

Institute, London. *Crosspoint Parnias, Wuppertal*. A view of the gallery's pioneering years between 1949 to 1965.
EVENTS
April 10 and 11, Stirling Film Theatre. *Teser*, Roman Polanski's adaptation of the Hardy novel.
Tuesday April 13 until April 24, Crucible Studio, Sheffield. *Operation Bad Apple*, by G. F. Newman, author of the television plays which formed the series *Law and Order*.
Tuesday April 13 until April 17, MacRobert Arts Centre, University of Stirling. *Scotland The What? A light hearted look at Scotland and the Scottish* by George Donald, Stephen Robertson and Bill Hardie, directed by James Logan.
Wednesday April 14, Museum of Modern Art, Oxford. *The General Line*. Eisenstein film which tells the story of the mechanization and collectivization of a farm, made in 1929.
Thursday April 15, Riverside Studios, Hammersmith, London. 6.30pm. Author Salman Rushdie reads from his novel *Midnight's Children*, which won the Booker Prize last year.
Saturday April 17 until April 25, St George's, Havelock Square, London. *The London Handel Festival*. Includes *Alexander's Feast* and *Chandos* Anthems. Details from Lashmar Ltd, 18 South Molton Street, London W1.
Sunday April 18, National Gallery of Scotland, Edinburgh. Video film about the life and work of Ian Hamilton Finlay, shot on location at Stowarth, Dumfriesshire, Lanark.
Tuesday April 20, The Art Workers' Guild, 6 Queen Square, London WC1. *London Theatre and the Law Favourite Cases*. Lecture by John East.
April 21 and 22, Commonwealth Institute, London. *After Exams*, an open seminar on design in India to coincide with the *Design in India* exhibition.
Thursday April 22, MacRobert Arts Centre, Stirling. Concert of music by Parry, Williamson and Vaughan Williams, BBC Scottish Symphony Orchestra with Yuval Zaslavski and Gwyneth Prior (piano).
Friday April 23, Arts Theatre, Almgang Arts Centre, Tapscott, Wiltshire with the Paul 'Zec' Quartet celebrate Shakespeare's birthday.
Monday April 26, Goldsmiths' College, London. Corrolious Cantata memorial lecture by John Tibbany.
Tuesday April 27, Lecture Theatre, New University of Ulster, Belfast. *Film, the Media and Education in Ireland*, a lecture by Michael McLonee.

Jean Weisgerber argues that quoting from others can be an incentive to 'creative reading'

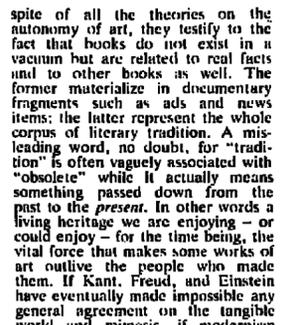
Quotation: is it the enemy of invention?

The use of quotations in contemporary literature is still a stumbling block to many of us. Disagreement over the question is, however, all the more surprising as the phenomenon is neither strictly literary nor even typical of the twentieth century. Quotations have always been in current use in music, for instance - in Stravinsky and Hindemith, of course, but also in Bach and Mozart. It also applies to painting and to film. Texts, however self-contained, live on other things: to start with, reality, they are only because the words used allude to it, and secondly the artistic tradition. Ever since the Old Testament and the Greek literature has been to a large extent an attempt at reproduction either with a view to representing nature (mimesis as opposed to creation) or with the intention of reshaping literary models (imitation as opposed to originality). As a result, two kinds of duplication are liable to occur. One is extraneous, fragmentary replicas of reality, for example when nonverbal, graphic material like photographs and posters, are integrated with the literary work: such a mixture or collage is to be found in Breton's *Nadja* or Aragon's *Le Paysan de Paris*. The other is textual, so that elements pertaining to the same medium are brought together: advertisements, sayings, some lines of poetry, etc. are interwoven with the main body of writing. This distinction is somewhat arbitrary. Graphic reproductions are not seldom accompanied with words, while it may happen, as in the extreme case of the esoteric *Shakespeare*, that the text reproduces all the reader gets: Breton's poem *PSST* is just an extract from the telephone directory. The main point is that the device allows one to bridge the gap between fact and fiction or between two or more imaginative works. All this shows that art is based on imitation. It is nourished by art as much as by reality. Montaigne observes that there are more books on books than on any other subject (*Plus on fait nous entreglois*) and Goethe similarly points out that a great master always uses "what was good in his predecessors, and that it was this which made him great" (to Eckermann, January 4, 1827). On the other hand, originality has been stressed since Young's *Conjectures* to such a pitch that novelty has now become the password of taste and fashion and it is no doubt something of a paradox to see that imitation is simultaneously being carried to extremes. How is the experimental trend of modernist and avant-garde literature, one wonders, to be reconciled with the literal repetition of passages taken from previous writings? This, indeed, what the word "quotation" stands for. It is different from "borrowing" in that it always implies an intention. Borrowings, we know, may be unconscious, but quotations connote a design. More particularly, they refer the reader to their sources: You have to take their original context into account if you want to enjoy the result, whereas mere borrowings are always "non-referential" and more often than not carefully concealed. On the contrary, quotations are usually explicitly marked off from the words surrounding the language used, or a brief mention of the author quoted. In addition, to their allusiveness and "referential" value, they somehow stand out against the new environment into which they have been introduced. The distance, however small, between quotation and context is that required by critical reading - at this stage you may put the book aside, think it over, and perhaps carry sophistication to the point of putting the foreign body back in its original place. Literary quotations thus give rise to a to-and-fro movement between texts. They can be classified according to a number of criteria: As far as faithfulness to the source is concerned, they range between allusion (to



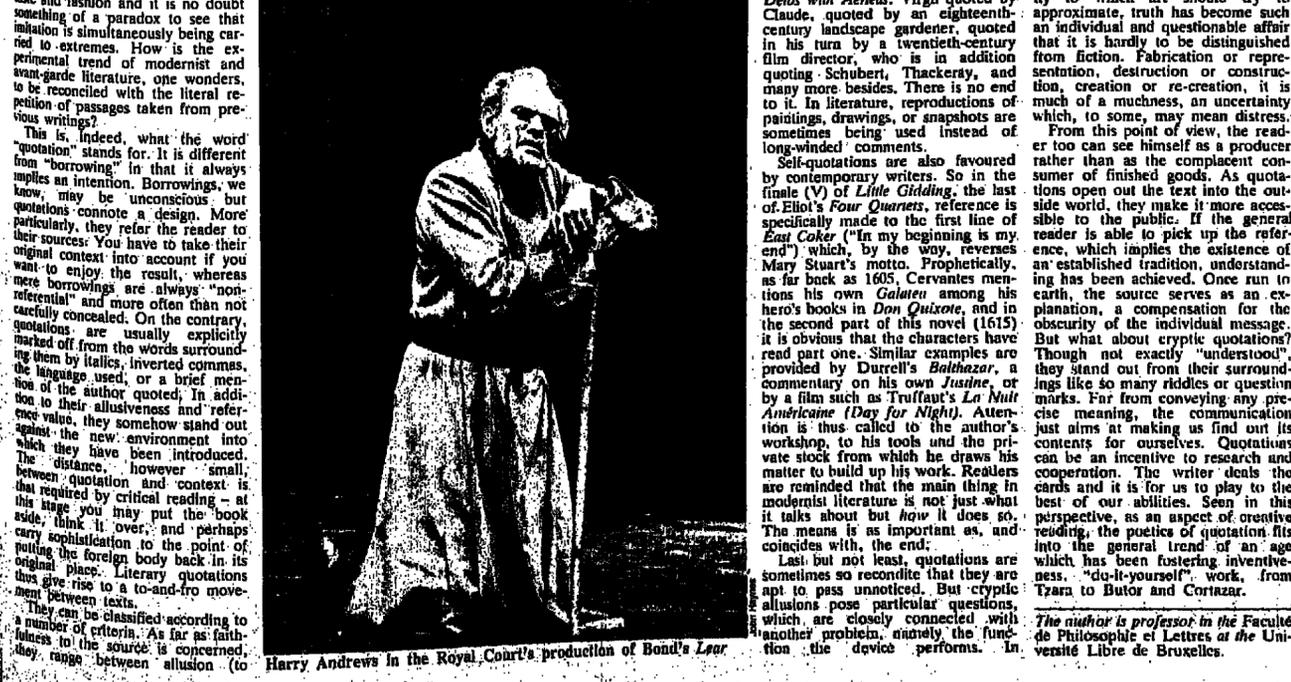
Queneau: distorter of Hamlet

squalor, even the absurdity and tragic awareness of our age of anxiety) although it does so obliquely, ironically. Similarly, if Hugo Claus's superb novel *De Verwondering* (astonishment) can be described up to a point as a kind of negative of the *Divine Comedy*, its atmosphere of madness, alienation, and violence is still less intended to amuse. Claus seldom quotes literally but departs from the original are not to be estimated only in terms of literalness. Omissions can have the same devastating and regenerating effects, as a comparison between Shakespeare and Stoppard's *Rosencrantz and Guildenstern Are Dead* will show. When rewriting the famous scene in which Hamlet is seen reading and talks to Polonius, Stoppard makes the two attendant lords witness the meeting (Shakespeare has sent them offstage) and repeats some scraps of conversation faithfully while leaving out a number of lines. In fact, his tragedy is not about the prince. He is writing more democratically about two nondescript, interchangeable stooges, two antiheroes, neither of them a problem to generations of playwrights and playwriters. Stoppard for one shows that, insignificant though they are, they too had to suffer "The slings and arrows of outrageous fortune". This time, the scene is set, as it were, in the wings of "The Globe" with the two courtiers listening in the limelight in Hamlet talking at a distance. Tradition just provides a springboard, a "pre-text", as a well-known pun has it. Two further characteristics of contemporary quotations are their eclecticism and their frequency. The first is obviously connected with the desire to diversify the modes of expression and the craving for innovation underlying modernism. Hence the cult of the esoteric. Besides Shakespeare, Dante, Homer, and *The Bible*, many less known sources are made use of: St John of the Cross, Eichelendorff, Frazer, and various medievalographies in Claus's *De Verwondering*; the *Upanishads* in *The Waste Land*; Rilke, Nijinsky, and St Anselm in Auden's *New Year Letter*; Old Provençal or Chinese in Pound, "Imitation" is no longer limited to the classics. The gamut of sources reflects the extension of our historical sense, the ever-increasing feeling that the enormous heritage which is at our disposal, part of the music from Schubert, part of the shots shows the park surrounding Stourhead House in Wiltshire. Now it has been argued that this park with its lake, its bridge, and its classical temple was modelled on a painting by Claude - *Coast View of Delos with Aeneas*. Virgil quoted by Claudius, quoted by an eighteenth-century landscape gardener, quoted in his turn by a twentieth-century film director, who is in addition quoting Schubert, Thackeray, and many more besides. There is no end to it. In literature, reproductions of paintings, drawings, or snapshots are sometimes being used instead of long-winded comments. Self-quotations are also favoured by contemporary writers. So in the finale (V) of *Little Gidding*, the last of Eliot's *Four Quartets*, reference is specifically made to the first line of *East Coker* ("In my beginning is my end") which, by the way, reverses Mary Stuart's motto. Prophetically, as far back as 1605 Cervantes mentions his own *Galatea* among his hero's books in *Don Quixote*, and in the second part of this novel (1615) it is obvious that the characters have read part one. Similar examples are provided by Durrell's *Balthazar*, a commentary on his own *Judine*, or by a film such as Truffaut's *La Nuit Americaine* (thus called for the author's workshop, to his tools and the private stock from which he draws his matter to build up his work. Readers are reminded that the main thing in moderate literature is not just what it talks about but how it does so. The means is as important as, and coincides with, the end. Last but not least, quotations are sometimes so reconcite that they are apt to pass unnoticed. But cryptic allusions pose particular questions, which are closely connected with another problem, namely the function the device performs. In spite of all the theories on the autonomy of art, they testify to the fact that books do not exist in a vacuum but are related to real facts and to other books as well. The former materialize in documentary fragments such as ads and news items; the latter represent the whole corpus of literary tradition. A misleading word, no doubt, for "tradition" is often vaguely associated with "obsolescent" while it actually means something passed down from the past to the present. In other words a living heritage we are enjoying - or could enjoy - for the time being, the vital force that makes some works of art outlive the people who made them. If Kant, Freud, and Einstein have eventually made impossible any general agreement on the tangible world, and if mimeticism in modernism lays stress on artistic freedom, aesthetic self-consciousness, and the individual vision, if it turns from realistic representation towards pure invention and self-reflection, it certainly does not keep aloof from reality, of which the legacy of the past is after all part and parcel. On the contrary. What has changed is our approach to these things. The modernist is the exact opposite of the antiquarian, who studies the past for its own sake; to him, it is just a storehouse of information, a quarry from which material which is meaningful unless it is thoroughly processed. As the past is viewed from the vantage point for the present, that is of the living subject, its values are no longer regarded as models but as stepping-stones to new values. "Imitation" is thus made subservient to novelty; quotations link up what is subjective, unique, private, and unknown with a - potentially - common background. Tradition has to be disrupted in order to be refashioned in that way. In the last analysis, some objections raised to the use of quotations can perhaps be ascribed to a distrust of modernism, especially on this head. In addition, since modernism brings out the role of the writer as producer, engineer, or maker and sometimes even shows the work of art to be a plain artefact, it also undermines the time-honoured illusion of verisimilitude. Unlike Dickens, who maintained that "so exaggerated a fiction as the *Barnacles* and the *Circumlocution Office*" is founded on "the common experience of an Englishman", the Virginia Woolf mentions in the Introduction to *Mrs Dalloway* the *autobiographical* "truth which lies behind those immense façades of fiction" and she goes on to say "if life is indeed true, and if fiction is indeed fictitious". Because there are no accepted opinions about the reality to which art should try to approximate, truth has become such an individual and questionable affair that it is hardly to be distinguished from fiction. Fabrication or representation, destruction or construction, creation or re-creation, it is much of a muchness, an uncertainty which, to some, may mean distress. From this point of view, the reader too can see himself as a producer rather than as the complacent consumer of finished goods. As quotations open out the text into the outside world, they make it more accessible to the public. If the general reader is able to pick up the reference, which implies the existence of an established tradition, understanding has been achieved. Once run in earth, the source serves as an explanation, a compensation for the obscurity of the individual message. But what about cryptic quotations? Though not exactly "understood", they stand out from their surroundings like so many riddles or question marks. Far from conveying any precise meaning, the communication just aims at making us find out its contents for ourselves. Quotations can be an incentive to research and cooperation. The writer deals the cards and it is for us to play to the best of our abilities. Seen in this perspective, as an aspect of creative reading, the practice of quotation fits into the general trend of an age which has been fostering inventive-ness. "do-it-yourself" work, from Tzara to Butor and Cortázar.



Queneau: distorter of Hamlet

well as Charles d'Orléans. In this field too, the old principle of hierarchy has been rejected. Besides, far from occurring occasionally, quotations often invade the whole work. Sometimes we have to do with a single framework or theme, which is torn to pieces in a series of variations, very much like the Diabelli waltz in Beethoven's op. 120. This is what happens to *The Ulysses in Ulysses* or to *King Lear* in Bond. Conversely, mosaics of disparate material are also to be found. Every undergraduate knows that the end of *The Waste Land* is nothing but a montage of "fragments" in Italian, Latin, English, French, and Sanskrit. Owing to the internationalization of culture, passages taken from foreign languages are not translated, the result of which is that some polyglot neudeus do not seem to belong to any literature at all. Montaigne and Bacon, we know, indulged in Latin citations but Pound and Van Ostaen go much further. They display a strong tendency to transcend the limits of any given language. Likewise, gaps between the fine arts are bridged with a singleness of purpose beside which Wagner's *Gesamtkunstwerk* almost sinks into insignificance. Textual quotations are common in futurist and cubist painting, in Carlo Carrà's *Patriotic Celebration* for example. In a film like Kubrick's *Barry Lyndon*, literature, cinema, music, and painting become merged in a jigsaw puzzle or a concatenation which has taken centuries to reach completion. The story is borrowed from Thackeray, part of the music from Schubert, and one of the shots shows the park surrounding Stourhead House in Wiltshire. Now it has been argued that this park with its lake, its bridge, and its classical temple was modelled on a painting by Claude - *Coast View of Delos with Aeneas*. Virgil quoted by Claudius, quoted by an eighteenth-century landscape gardener, quoted in his turn by a twentieth-century film director, who is in addition quoting Schubert, Thackeray, and many more besides. There is no end to it. In literature, reproductions of paintings, drawings, or snapshots are sometimes being used instead of long-winded comments. Self-quotations are also favoured by contemporary writers. So in the finale (V) of *Little Gidding*, the last of Eliot's *Four Quartets*, reference is specifically made to the first line of *East Coker* ("In my beginning is my end") which, by the way, reverses Mary Stuart's motto. Prophetically, as far back as 1605 Cervantes mentions his own *Galatea* among his hero's books in *Don Quixote*, and in the second part of this novel (1615) it is obvious that the characters have read part one. Similar examples are provided by Durrell's *Balthazar*, a commentary on his own *Judine*, or by a film such as Truffaut's *La Nuit Americaine* (thus called for the author's workshop, to his tools and the private stock from which he draws his matter to build up his work. Readers are reminded that the main thing in moderate literature is not just what it talks about but how it does so. The means is as important as, and coincides with, the end. Last but not least, quotations are sometimes so reconcite that they are apt to pass unnoticed. But cryptic allusions pose particular questions, which are closely connected with another problem, namely the function the device performs. In



Harry Andrews in the Royal Court's production of Bond's *Lea*

Events

CONTINUING EXHIBITIONS
Until April 11, Scottish National Portrait Gallery, Edinburgh. *The Gentle Eye*. Photographs by Jane Bown of *The Observer*.
Until April 23, Bedford Way Gallery, Institute of Education, University of London. *Balraj Khanna's paintings from 1966 to 1981*. His more recent work on show until April 25 at the Ian Hildebrand Gallery, 27 Great Russell Street, London WC1.
Until April 25, Serpentine Gallery, London. *Eureka*. Artwork from Australia.
Until May 1, Royal Museum, Canterbury. *The Sculptures of Degas*.
Until May 1, New 57 Gallery, Edinburgh. *Marcel Duchamp's Travelling Box*. Miniature versions of the artist's paintings carried in a leather case.
Until May 1, Camerwork, 121 Roman Road, London E2. *Underdeveloping Bangladesh: 225 years of British involvement*. Photographs by Tom Learmouth.
Until May 2, Whitechapel Art Gallery, London. Paintings and books by Anselm Kiefer and paintings and photographs by Frida Kahlo and

A sharp reduction in the University Grants Committee grant to the universities, together with requests to reduce student numbers, have aroused considerable opposition from universities and their supporters.

The universities see them as wholly bad. Others have applauded the Government, on the grounds that after the great expansion in the universities in the 1960s and 1970s, the universities failed to save resources when the need for economy became evident. By exerting pressure on the universities at a time of general pressure on public expenditure it is argued that the Government is helping to ensure they will make a serious effort to get rid of their surplus.

The Government has also been criticized for providing fewer university places when the number 18-year-olds is increasing and will not fall below the 1979-80 figure until 1987-88. Here again there is a possible answer: the Robbins' principle left wide open the size of tertiary education. Some believe that returns on educating university students are now low. More has meant worse, and there is no case for expansion, even with the temporary rise in numbers.

Judgments are to some extent economic, but they are also political. They have to be seen in the context of the Government's policy towards the whole public sector.

The cost to public funds of an unemployed potential undergraduate living at home is £1,100 in Supplementary Benefit per annum. If he or she did not live at home, the benefit would be higher. A single person living in a single room might perhaps get £35 a week or £1,820. Some potential undergraduates have wives and children, and the cost in their case would be higher.

The current sessional grant for undergraduates living away from home outside London is about £1,000, after parental contribution. Their fees are £900 (in 1981-82), making a total cost to public funds of about £2,000. If they had to keep their room during the vacations, and had no other means of support, they might receive supplementary benefit of £570. This would amount to about £2,500 a year in all.

The net additional cost to public funds on this basis might be a maximum of £1,400 for a single student but it could be less than £200 (£2,000 less £1,820). It will be even lower in 1982-83, when home student fees are halved, and the net maintenance grant is scarcely changed.

The payment of supplementary benefit to a potential student presumably covers essential needs and no more. A student's maintenance grant, however, includes provision for a rent payment to the university. In the short run, this rent payment can be looked on as a pure bonus by the university, since little money will be saved if student's room is left empty. The resources saved by the community are therefore less than the cost to public funds.

A student's fees can also be looked on as a pure bonus for a university in the short term. Assuming that the university has the staff and facilities to teach an additional student, the extra cost will only be that of any extra materials that are consumed. In most cases this will be very small.

An undergraduate may therefore cost public funds £2,000 a year in 1981-82, in maintenance and fees. The extra resources used up may not even amount to a maintenance grant (including parental contribution). They are likely to be above the supplementary level of £1,100, but not by much. If the supplementary benefit is as high as £35 a week (£1,820 a year), the extra resources could be negative rather than positive.

The obvious of this argument is that an increase in student numbers of some 5 to 10 per cent would also have a low social cost in the short term. There may well be unused private accommodation which could be utilized. University staff could spread themselves more thinly over a greater number of students. Buildings could be more intensively used, universities would not therefore need extra fees to cater for the extra students - they would simply need enough income to cover extra



Social cost of the cuts

Which really costs more - a potential student on the dole or a student studying? Aubrey Silberston and Jeremy Turk work it out in social terms

maintenance costs. This is true whether extra students come from home or from overseas. Since fees from overseas students are well above the short-term marginal costs of taking such students, universities have a strong incentive to increase their numbers.

As time passes, the potential savings from fewer students grow in size. Surplus accommodation can be let commercially or sold off. Retiring university lecturers need not be replaced. Spare university lecture rooms and laboratories may be sold. The number of stories in student administration could be reduced. The whole process would take several years before anything like *pari passu* decreases in costs could be achieved.

The marginal costs involved depend on the period of time under consideration. In the short run these are very low. Even over a three-year period, such as that ending in 1983-84, the savings are unlikely to be great. But staff can be run down to some extent, and consumables can be saved. Savings on accommodation are also possible. It is less likely that much can be saved on laboratories.

The marginal costs saved by running down about one-tenth of the present number of students over a three-year period are likely to be far less than the "full average cost" figure of £6,000 a year per student quoted by the Government. This is partly because the whole of the £6,000 is not attributable to students but also because any savings must take several years to achieve.

This all assumes that the universities have been told to reduce the number of their students by 10 per cent or so over three to five years, and have also been told to run down their resources as soon as they decently can. In fact, universities have been told to make a reduction in their student numbers, and at the same time they have had a large cut in their grants. There is therefore a sharp reduction in expenditure rather than a gradual one.

Potential students who start by being unemployed, will presumably not be eligible for the new Youth Opportunities Programme. He or she will therefore go on drawing supplementary benefit. Even if they get a job eventually, their place as a member of the unemployed will be taken by others younger (assuming no general reduction in unemployment). It can be assumed, therefore, that unemployed students will continue to be a burden on public funds for as long as they would otherwise have been a student.

In the long term, public funds will be relieved by more than the costs of maintenance, and fees alone, since the UGC grant to the universities has been much reduced. There will however be a medium term cost for redundancies. First estimates suggest that the total cost may be equivalent to about half the cut in university income in 1983-84.

The loss of UGC grant caused by

the removal of "full costs" on account of overseas students was about 10 per cent. Even if no fall had occurred in overseas student numbers, the universities would have lost money because overseas student fees are not as high as the "full cost" reduction. Given the one-third fall in overseas student numbers that is thought likely to occur (the fall has already been a quarter) the universities may recover little more than 3 per cent of the 10 per cent cut from overseas students' fees. Adding the 7-8 per cent "volume" cut imposed by the UGC, the net loss of income would be about 15 per cent in real terms.

The universities will have lost 5-6 per cent of home undergraduates over this period, and perhaps 10 per cent of all students, including overseas students. The real cost per student, from the point of view of the public purse, will have fallen by about 6 per cent.

From the official point of view, therefore, the full cost of the reduction in numbers will have been more than matched by the reduction in grants. Taking the official figure of £6,000 per student, rather more than this will have been saved by the Government for every student lost to the university system by 1983-84. Therefore, the Government will incur costs of at least £1,100 per student a year in supplementary benefit. It will also incur redundancy costs for university staff (and possibly unemploy-

ment pay also). It will save UGC grant and maintenance costs of over £6,000 per annum for every student devoted to the universities. The whole operation is bound to save public money, although orders of magnitude are not easy to estimate.

The £6,000 per student calculation is based on the notion that the total costs of running a university are attributable to the cost of educating its students. This is obviously not so, because much research goes on which is independent of teaching and caring for students. Similarly, not all costs of administration are attributable to students. The role played by universities in the community is much greater than their role as educators of students.

Given the nature of university work, it is not possible to name a sum of money attributable to non-teaching activities. To deduct £6,000 from university grants for every student that they take on, however, is certainly to deprive them of facilities for their purposes, especially for research. It weakens their general ability to make a social contribution.

The position is made worse because entire universities are being abolished in order that savings should be made, although the reasons for this are understandable. What is happening is that all univer-

sities are being subject to cuts, although the severity of the cuts differs. The effect of this, in the short time scale laid down by the Government, is to cause great disruption.

In addition, economies of scale are lost. In so far as departments (or indeed entire universities) are reduced below a certain size, they fall below the scale that is desirable for a wide range of teaching and research.

As a result, universities will become weaker and less able to fulfill their roles effectively. This is not to deny that some useful reorganization will occur, or some fat will be cut out. But the cuts have been far more severe than can reasonably be justified by reorganization gains or by estimates of the fat that previously existed.

On the human side, there is waste of staff and waste in potential students. Many staff will retire early and will cease to teach or do research. Junior members will have to leave. Some will make valuable contributions elsewhere. All will lose the opportunity to do research and to teach, and will be unable to follow their chosen profession, unless they go abroad.

If aggregate demand in the private sector remains unchanged, a job for an ex-university teacher will probably mean a job less for someone else. The Government will be liable for unemployment pay, and there will be an overall net loss of national output.

Students lost to universities may go to polytechnics, but in doing so they will bring out others, since curricula are being put on tertiary education. An equivalent number is therefore likely to lose the chance of higher education. Standards in polytechnics should rise, but at the cost of a contraction in the whole system. If it is assumed that the marginal students lost to the system receive little or no alternative training (which seems likely), there will be a substantial loss to the individuals concerned, and a loss to society as a whole.

Various studies have been made of the "returns" to higher education. By and large, these calculations suggest a return to higher education comparable with that from other forms of investment. It has been argued that the entire benefit goes to the person concerned in the form of higher income, so that the gain is entirely a private one. It would be difficult to maintain, however, that there are not significant gains to society as a whole from having a more highly educated population.

It can be argued that if the gains accrue to individuals, then it should be financed more from private funds. Such a change would mean the partial abandonment of attempts to use public education to achieve redistributive goals, as well as efficiency goals. This is a political issue. The methods used to deprive the universities of public funds do not seem designed to

effect an orderly shift from public to private funding of a more or less unchanged amount of higher education. The possibility that universities could increase fee income from less qualified, but wealthy, students does exist, and some universities are in fact taking steps to do this in the case of overseas students. The value of their accreditation depends on the high standards which have been maintained in the past by the choice of students on the basis of ability rather than wealth. To seek to maintain this reputation is not elitism, but a desire that a worthwhile system of higher education should continue to exist for those best able to profit from it.

Because of the hurried nature of the rundown in universities, the effects are far worse than if the cuts had been phased more slowly. The chaos to universities will suffer a permanent loss because the system was cut by 8-9 per cent rather than expanded by 6 per cent at the crucial time. There will also be a permanent loss to many of those who wished to enter university teaching and will be denied the opportunity of doing so.

It is not possible to quantify most of the effects. On the narrower calculation, the universities have been deprived of over £6,000 per student when the average costs attributable to each student must be appreciably less. On the widest calculation, the contribution that the universities make to society has been seriously affected, with consequences that will take many years to have their full effect.

The cuts have come at a time of depression. Resources released from the university sector will not necessarily be used up in other sectors. At a time of full employment, on the other hand, resources would in time have been used elsewhere, although probably not as productively.

What effect will the university cuts have on aggregate output and employment in present circumstances? Here opinions will depend to some extent on one's brand of economic analysis. Briefly, the government's argument is that cuts in public expenditure should eventually release resources for private expenditure. There is little evidence to date that this has occurred. Keynes would not be surprised at this, since the world would expect a fall in public sector demand to lead to a multiplied fall in demand throughout the economy. Even monetarists would have to admit that the tight monetary policy of the government has not yet stimulated private expenditure.

Any political, social, or economic gains from the cuts inflicted on the universities would have to be considerable to offset the ill effects. We doubt whether convincing arguments could be put forward to show that the gains of the necessary magnitude will be secured. What is more, the policy followed by the government forces a reduction in home student numbers while encouraging an increase in the numbers of overseas students. What is the logic of this?

The universities will have to face for some years with the reduction in their income. We believe that they should fight the restriction on home student numbers. Why should one-seventh of a generation of students be deprived of university education when the short-run marginal cost of educating them are so low? Some of those in the universities are students that a policy of actually increasing home student numbers at that time would give a hostage to fortune, but we believe that universities should be prepared to take the risk. We think they should say: "We deplore what you have done to our income, but we will do our best to educate all those home students who meet our normal entry standards. This will do them more good to society, than the policy of depriving the financial cost of doing nothing for potential students who could be educated at high extra cost."

Aubrey Silberston is a professor of economics and Jeremy Turk is a lecturer in economics at Imperial College.

BOOKS

Absolutely about the stuff

by Peter Winch

The Collected Philosophical Papers of G. E. M. Anscombe
Volume one: From Parmenides to Wittgenstein
Volume two: Metaphysics and the Philosophy of Mind
Volume three: Ethics, Religion and Politics
Blackwell £10.00, £15.00 and £12.00
ISBN 0 631 12922 7, 12932 4 and 12942 1

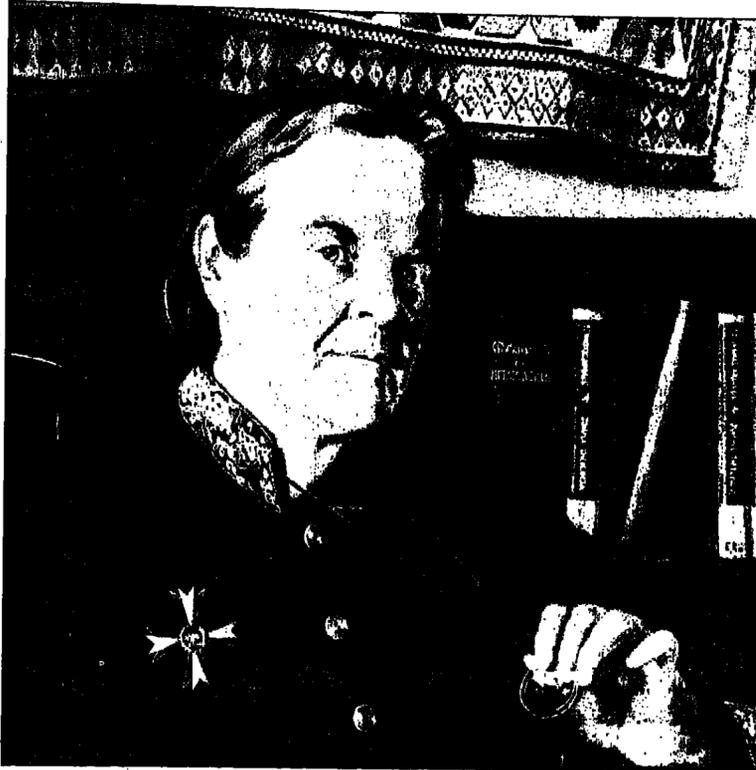
Elizabeth Anscombe speaks of, attending H. H. Price's lectures on perception and phenomenalism when she was an undergraduate in Oxford: "I used to sit tearing my gown into little shreds because I wanted to argue against so much that he said. But even so, what he said seemed to me absolutely about the stuff."

That last phrase seems to me marvelously to catch her own relation to philosophy and also to characterize her own work. No one with any serious interest in philosophical issues, reading these writings which span her career from 1939 onwards, could doubt that they too are absolutely about the stuff. In this brief review I cannot begin any serious discussion of the rich and varied content of these three volumes, but I shall try to give some indication of the range of subject matter she treats of and also to consider the general nature of her contribution to the subject and the source of her writing's power.

The first volume is devoted to certain of the most important figures in the history of philosophy. Those whose work is discussed have all, in their different ways, left their mark on her own work. "Subsequent philosophy is footnotes on Parmenides", she says, adapting a remark of A. N. Whitehead's about Plato. Parmenides' main premise: "It is the same thing that can be thought and can be", discussed in the opening paper of this volume, certainly crops up again and again in the work of many philosophers on many apparently different problems. (It is central to Professor Anscombe's own marvellous treatment of "The Reality of the Past" in volume two - a paper which made a deep impact on me as a student when it was first published in 1950 and continues to do so now.) It raises many of the questions with which Plato's Theory of Forms was designed to deal (to which two papers are devoted here). It is responsible for some of the difficulties about determinism and the like involved in the relation between predictions which turn out true and the events which they predict (discussed here in the celebrated "Aristotle and the Sea Battle"). It is involved at a crucial point in Professor Anscombe's discussion of Hume's denial that "whatever begins to exist must have a cause of existence". And it is central to the question that arises out of Wittgenstein's use of the notion of a "language game": Whether certain facts which it is an essential feature of certain human practices and ways of speaking not to question, can be said to have any reality independent of those practices, etc. This is discussed in "The Question of Linguistic Ideality".

The essays making up volumes two and three are focused more directly on problems rather than on particular philosophers, though there is ample discussion of the way philosophers work on the other philosophers' and more good to society, than the policy of depriving the financial cost of doing nothing for potential students who could be educated at high extra cost.

Many of the questions discussed in volume three, on the other hand, are of interest to a wider public than academic philosophers: the justice of



John O'Connor's portrait of Professor Anscombe in Somerville College, Oxford.

Great Britain's posture in the 1939-45 war against Germany (on which there is a very courageously forthright piece, written in collaboration with Norman Daniel as early as 1939 and earning the displeasure of the Catholic hierarchy, who "seemed to have much more authority in those days"); the morality of President Truman's decision to use the atomic bomb against civilian targets in Japan; the use of contraceptives; the source of the peculiar authority exercised by the state; the nature of majority rule; and so on.

However, although there certainly is a distinction to be made here between issues which are quite clearly technical philosophical interest and those which are more generally accessible, it is a tenuous one. Moreover, the distinctive way Professor Anscombe writes about both kinds of question makes it more misleading to insist on the distinction than is the case with many - perhaps most - writers. She is as far removed as may well be from the attitude of mind which seems to inform many of the contributions to such a journal as *Philosophy and Public Affairs* where the technical methods and results supposedly arrived at in the handling of properly philosophical questions are "applied" to general questions of social morality or public policy in a way which lacks any philosophical depth and in a querulously arrogant tone which thinly covers the lack of any genuinely humane concern for the values inherent in the life of mankind. Professor Anscombe always writes with passion and energy on whatever it may be, and in a way which is certain to arouse the violent opposition to many points of any reader who cares about the subject matter. Sometimes her passion seems to blind her to what might be said on the other side of the question and to lead her into unfair argument (as I shall try to illustrate later). But her passion always has a deep resonance to it which makes it worth attending to, rather than the harsh squawk-

ness of the disaffected intellectual. Furthermore, and I think connectedly, her philosophical concerns, even in their most technical embodiments, tend to spring from living commitments in a variety of contexts: moral, political, religious. They are rooted in real life and draw their sustenance from it. Her aim is often enough to provide a philosophical clarification of areas of thought in which she feels that idiosyncrasy or wickedness (often enough both, the one in the service of the other) are being perpetuated.

This is true, for instance, of her classic monograph, *Intention* (of which there are many echoes in these volumes), reliably said to have been written in response to attempted defenses of President Truman's use of atomic weapons against Japan on the grounds that his intention was not to kill innocent civilians so much as to bring the war to a swift end. Professor Anscombe unsuccessfully opposed the proposal that Oxford University should confer an honorary doctorate on Truman; the pamphlet which she published in support of her case is reprinted in volume three. It contains some fine discussion of concepts like "innocence", "punishment", "pacifism" and some very precisely directed moral polemic. For instance:

Protests by people who have no power are a waste of time. I was not seizing an opportunity to make a gesture of protest at atomic bombs; I vehemently object to our action in offering Mr Truman honours, because one can share in the guilt of a bad action by praise and flattery, as also by deluding it. That unusual combination of moral passion and clarity of purpose and argument is very characteristic of her writing on political and moral matters at its best. That is not to say that she is never carried away by the intensity of her feeling into arguments whose force is more questionable. For instance, in "War and Murder" her articulation of the serious difficulties inherent in a pacifist position is not really helped by her

claim that pacifism tends to corrupt people by teaching them "to make no distinction between the shedding of innocent blood and the shedding of any human blood". Perhaps some pacifists have claimed that no such distinction can be made - I do not know - but pacifism needs only to maintain (if it successfully can) that that distinction cannot be employed in a valid justification of going to or fighting in, war; it can still allow that there is a big moral difference between the killing of the innocent and the killing of enemy combatants. And again, whatever particular pacifists may have said, "all war must be a *l'outrance*!" that those who wage war must go as far as technological advance permits in the destruction of the enemy's people?"

To think this is to suppose that there are no other sources of argument to be drawn on in distinguishing between the moral characters of different ways of conducting a war, beyond those considerations which one may use to determine the rightness and wrongness of going to war at all in the first place.

The same essay also contains examples of Professor Anscombe's sometimes selective use of scripture in support of her favoured moral positions. She gives short shrift to those whose Christianity involves a God "whose appeal is to goodness and unselfishness, and to follow (whom) is to act according to the sermon on the mount - to turn the other cheek and to offer no resistance to evil", protesting that the sermon offers "evangelical counsels" not "precepts". Be that as it may, the injunctions are very explicit and direct and given by one, as St Matthew tells us, who "taught them as one having authority, and not as the scribes"; there seems something incongruous in countering them with a reference to Christ's commendation of the centurion's faith and St John's injunction to soldiers to be content with their pay in support of the view

that Christianity is compatible with soldiering as a profession and (presumably) that it licenses the use of military violence. (Perhaps I should make it clear that I am not here offering any view of my own about the relation between Christianity and pacifism.)

Even the most sympathetic reader is likely to experience rushes of blood to the head at occasional excesses of this sort. But the commission of intellectual excesses is a hazard attendant on the exercise of intellectual courage. And the predominant impression given by these books is this latter virtue rather than intellectual excess. The courage and boldness displayed in the treatment of philosophical problems is a concomitant of Professor Anscombe's deep concern for certain values outside it. Philosophy is important to her as a struggle against nonsense and intellectual pretension, wherever they are to be found; and they are found of course within philosophy as well as outside it.

Her repeated struggles with the concept of causality, which form a major part of volume two, illustrate the point. The sense which can be attached to conditional statements which are "contrary to fact" (for example, about what would have happened if Hitler had won the war) is a problem central to the analysis of causality and one involving some of the most difficult technical issues in philosophy and logic. Professor Anscombe tells us in the introduction to this volume that she first became interested in the question on her conversion to Catholicism in her teens, because of the theological doctrine of *scientia media*: that God knows what anyone would have done in any unaltered circumstances, such as the man in question's not having died when he did. She could not believe this doctrine (and was relieved to learn that she was not required to) because of her conviction that "certainly... there was no such thing as how someone would have spent his life if he had not died as a child".

The idea of (as it were) counterfactual facts was one which was here advanced in the service of an extra-philosophical interest - namely, a theological interest in accounting for God's relation to the world in terms of theodicy. Her initial rejection of that idea was an instance of what Russell once called "a robust sense of reality"; but to carry weight it had to be supplemented by quite technical philosophical argument, of a kind that she was still engaged in over a quarter of a century later in the paper on "Subjunctive Conditionals". The really difficult feat in philosophy is to retain a robust sense of reality, to resist immersion in such technicalities and not to argue oneself into disregarding plain facts, as has happened in discussions of causality at least as much as anywhere else.

She is adept at spotting such disregard. There is, for instance, a well-established practice of discussing causality in terms of "necessary and sufficient conditions". Having accustomed oneself to go along with that, one is suddenly brought up short in a most salutary way (in "Causality and Determination") by the reminder that "sufficient condition" is a term of art, and one which "coverts the understanding into not noticing an assumption. For 'sufficient conditions' sounds like 'enough'. And one certainly can ask: 'May there not have been enough to have made something happen - and yet it not have happened?'"

In my opinion Elizabeth Anscombe has a strong claim to be regarded as the most interesting and arresting philosopher writing in English at the present time. It is immensely valuable to have together in this accessible form all these important writings.

Peter Winch is professor of philosophy at Kings College London.

BOOKS

Success in twenty years

Mondragon: an economic analysis by Henk Thomas and Chris Logan. Allen & Unwin, in cooperation with the Institute of Social Studies at The Hague, £12.00. ISBN 0 04 334006 6

In 1943 a priest by the name of Don Jose Maria Arizmendi, faced by high rates of unemployment among his parishioners in the small town of Mondragon in the province of Guipuzcoa, the Basque region of Northern Spain, started classes in elementary technical education. In 1956, with his help, five of Don Jose Maria's former students established a producer cooperative (ULGOR, an acronym of the initial letters of their names) manufacturing purified cooking and space-heating stoves. By the end of the seventies there existed in the province 70 cooperative factories operating in a wide variety of markets with a workforce (membership) in excess of 15,000. A Cooperative Bank (The Caja Laboral Popular) with 93 branches and over 300,000 deposit accounts, a technical school, a social welfare cooperative and various ancillary service cooperatives.

From nothing to "spectacular success" within the compass of twenty years - why? What is the secret of Mondragon in a field where even the most insistent advocates of producer cooperation have to concede that failure has been the general rule? It is perhaps impossible to answer this question definitively given the uniqueness of the Mondragon group of cooperatives; there being no similar groups for direct comparisons to be made. Thomas and Logan do draw parallels with the kibbutzim, the social property sector in Peru and the self-managed system in Yugoslavia but in each case the comparison is tenuous. Nevertheless in providing the first in-depth economic analysis of Mondragon, these authors have gone as far as possible in shedding light upon those factors which may well account for Mondragon's spectacular growth.

But is their success attributable to a particular constellation of factors unrepeatable elsewhere or to some generalizable features? In the former respect there are those who have pointed to the consolidating effect of Basque nationalism and to the long-standing local traditions of thrift. It seems indisputable to be the case, from Thomas and Logan's careful and historically located analysis, that these factors have played a significant role though they cannot be given a sole preeminence.

The role of the Caja Laboral Popular (CLP) is certainly an essential ingredient in the cooperative group's overall performance. Not only is it a successful credit cooperative in its own right providing loan capital to the industrial producer cooperatives but it also has a management services department offering technical and managerial advice, particularly to fledgling cooperatives. Membership of the CLP may be on one of three grounds: employment within the bank, association with CLP as a cooperative, or individual membership. Thus CLP is neither a purely self-managed enterprise, in this way, the authors argue, an attempt has been made to discourage oligarchic tendencies so common in financial institutions.

The expansion in Mondragon, overseen by the CLP, has been consciously directed towards the establishment of a large number of relatively modest sized cooperatives with an average membership of only 225 rather than towards much larger units. In other words a policy has been adopted which emphasizes the economies (mainly motivational) of small size. While enjoying the advantages of smallness the cooperatives

appear not to have suffered any associated diseconomies for all the comparative statistics point consistently to the conclusion that the cooperatives make considerably better use of their available resources (capital and labour) than private enterprises in the same province of Spain. It is particularly noteworthy that even in the recessionary "seventies" the group has continued to grow (increasing the export performance from 10 to 20 per cent of output) which contrasts sharply with the private enterprises in Guipuzcoa.

From the beginning, education of the members has played a central role in the Mondragon movement; a programme of recurrent adult education, a special cooperative for the provision of R and D and a cooperative in which students work part-time in order to combine work and study are among the more prominent features of the widely based educational system. It is clear that the various educational programmes have had at least two effects; first they have given a strong technical base in the place of production but second, and more important, they have generated a commitment to the cooperative ideal.

The financial structure of the Mondragon cooperatives in both complex and by cooperative standards, innovative. The distribution of earnings is maintained with differentials not exceeding three to one; since the lowest wage rates are roughly on a par with the going rate in the province it is only those with positions of greater responsibility for whom there is a manifest sacrifice in income. It is surely one of the triumphs of the Mondragon group that it has managed to attract and hold on to highly qualified management despite the evident financial sacrifice they bear. Equally important, however, to the cooperatives are their individual capital accounts. The operating surplus in a cooperative is divided on the basis of a predetermined formula between individual cooperative reserves and these accounts. The latter accumulate over the years and are in all probability important in engineering a member's attachment and commitment to the cooperative.

The potent mixture of local nationalist tradition, the CLP, systematic education, a sense of equity and justice and the attraction of accumulating capital accounts (only fully redeemable on retirement) seems to have worked well. Thomas and Logan have, in a carefully argued text, given us the opportunity to inspect the details of the working of the Mondragon group of cooperatives. Their is the first scholarly attempt to do so in the English language and will find a wide and well deserved readership.

Peter Abell

Peter Abell is professor of sociology at the University of Surrey.

Reducing the risk

The Economics of the Financial System by A. D. Bain. Martin Robertson, £16.00 and £6.95. ISBN 0 8520 451 6 and 452 4

The fading role of the private investor, the "efficiency" of the financial system and the need for active promotion of industrial investment are all subjects that have been in the limelight since publication of the Wilson Committee's deliberations on the functioning of UK financial institutions. Having served on that committee, Professor Bain is obviously in an ideal position to guide the reader, through the maze of conflicting arguments and claims on these and other issues.

The emergence of pension funds as the major medium of investment can be traced to legislative developments on the pensions front and privileged fiscal treatment; contributions are a charge on gross income; fund earnings are accumulated (tax free); regular lump sums are payable; and regular pension receipts are

taxed as earned income. The attendant problems are less well known, however. Apart from the political aspects, the concentration of investment power has possibly led to a reduction in overall risk-taking within the economy and, more importantly, has left monetary policy exposed to the whims of a small number of individuals. This has placed the authorities, when issuing securities, in the invidious position of having to balance the extra debt-servicing costs incurred in bowing to the institutions' demands against the inflationary dangers associated with outflanking the institutions (which eventually have to invest "long"). The consequence is a "lumpy" time pattern for gilt sales, which exacerbates short-run control of monetary aggregate growth.

Concepts of "efficiency" concentrate on the adequacy of provision of payments facilities and savings and investment instruments, the success achieved in balancing savings and investment at a high level of economic activity under conditions of stable prices, and the conditions under which funds are transmitted through financial markets and institutions. Bain remains open-minded on the financial system's "contribution" to price and economic instability and the extent to which it is to blame for the relatively low (by international standards) levels of savings and investment. As for "micro-economic efficiency", the system's deficiencies appear to lie in the inadequacy of public sector investment (in the National Health for example) and, perhaps, an inability to adequately reconcile borrower's preferences for the institutional need for long-term assets, a bias against high-risk projects, imperfections in stock market pricing (perhaps as a result of mergers between jobbing firms) and distorting fiscal provisions (for example, those that favour investment in housing and government securities at the expense of other financial assets).

On the question of the need for active promotion of industrial investment the author rejects calls for the establishment of more lending agencies, asserting that the NEB and ACFI would suffice. However, he feels that there may be a case for changing the traditional relationship between lenders and borrowers, perhaps through executive directors, to improve confidence in company management and hence, one hopes, the flow of funds to industry. "Conservative" solutions are also suggested for ameliorating the deleterious effects of inflation, such as the "front loading" problem for borrowers (real cash flow borrowing costs are high in the early years of the loan) which acts as a deterrent to long-term investment and for augmenting the flow of equity and loan finance to small firms.

Beyond its discussion of "issues", the text incorporates an excellent analysis of the theory of the financial system, covering the role of the intermediary in reconciling, through risk and maturity transformation, the often conflicting portfolio requirements of ultimate borrower and lender and the concomitant welfare benefits resulting from the mobilization of savings and the reduction in information and transaction costs. This is supported by a superb sectoral flow-of-funds analysis which highlights most of the significant recent developments, which are the emergence of financial institutions as "real" investors, owing to the growth in leasing (the institutions, unlike many companies, possess the profits and rent; the squeeze on companies' profits and the growing significance of bank borrowing as a source of finance for the corporate sector); the effect of the Government's obsession with the public sector borrowing requirement on public sector investment; and the rise in the personal savings ratio.

As a survey of the financial system this book must rank as a success. There is sufficient analytical detail to attract the academic reader as well as the interested layman.

Maxmillian Hall

Dr Hall is lecturer in economics at Loughborough University.



English broadsword, probably made in 1635 in the sword factory at Hainlo. The guard is of steel, the pommel of cast brass, plated in silver. Taken from An Introduction to European Swords, by Anthony North, published by Her Majesty's Stationery Office at £3.50.

Whither Japan?

Japan's Options for the 1980s by Radha Sinha. Croom Helm, £14.95. ISBN 0 7059 2311 2

Western attitudes to Japan have probably moved full circle over the last 30 to 40 years. The resentment which followed the war gave way, in the 1950s and 1960s, to a curious curiosity for what seemed a rather quaint society. As economic success followed economic success, this patronizing attitude was, in turn, replaced by grudging admiration and by a quest for "lessons from Japan" which could be transplanted into Europe or North America.

More recently, both these feelings are being superseded by incipient and growing fears. Will Japan continue to outpace us? Will its successes in cars and ships be repeated tomorrow in aircraft and computers? More ominously still, will Japan, whether ostracized by the West or not, turn to arms expenditure in a quest for more exports and/or increased power?

Radha Sinha's book tackles this last question. After a brief and rather disjointed survey of Japan's economy and society, she discusses two broad themes: the nature of trade frictions and the pressures which these, and other forces, are putting on Japan's postwar pacifist stance. The lengthy discussion of the trade issue is disappointing. Its main thesis is that the problem lies in our inability to cope with structural change. Hence Japan is being used as a scapegoat; the West's insistence on bilateralism is economically unjustified; discrimination against Japan is unfair (since Japan is liberalizing its domestic market); in contradiction with our free trade principles. Since in the West one usually hears the opposite argument, it is refreshing to see the Japanese position put by a non-Japanese. But the presentation is one-sided. Too much is made of protectionism (after all the ingenuity of Japanese non-tariff barriers is at least as great as that of the Japanese). And the sad stories of the adjustment forced upon a few Japanese sectors by increased import penetration or reduced exports are hardly likely to move European readers faced with the virtual collapse of whole industrial areas.

More importantly, perhaps, the author exaggerates the danger which trade frictions imply for Japanese unemployment. It is true that the official statistics underestimate the problem in Japan, but the same is true in many European countries. The fact that Japanese unemployment has remained well below levels recorded elsewhere is due not so much to statistical under-reporting as to a very different and much more flexible labour market response to worsening job prospects - prices rather than quantities adjust. That is, wage growth decelerates but employment is preserved.

It is the unlikely prospect of rising unemployment in the wake of continuing trade frictions which leads the author to suggest that rearmament could be a way out for the economy. This thesis is not new and has been voiced in the past on several occasions. Indeed, we are told that within Japan a pro-armaments lobby was set up by Keidoren (the powerful business association) as early as 1952. So far at least the lobby has proved unwarranted and the particular lobby pretty ineffective (it happens even in Japan!). It is true, however, that the pressures have never been so strong as in the last two or three years, more for political than for economic reasons, and chapter seven provides a fascinating survey of the discussion of the defence issue in Japan.

The conclusion one draws is that of a society which seems deeply divided even if one can detect a bias in favour of the pacifist tradition. The author concludes that rearmament is the better option for the country - a thesis which may not go down well in a climate of "re-emerging national chauvinism" and "growing sense of superiority towards developing countries" and westerners alike.

While the second part of the book is interesting, it could all have been said more briefly. As it is, the book is too long and far too detailed. Nearly a thousand footnotes do little to help the reader, and in many places, words, and an immense mass of facts, is often presented with little or no comment. Thus, to document Japan's import efforts we are told on the same page that the country made \$2.2bn worth of emergency imports in one year, and increased the orange juice quota by 5,900 tons (worth perhaps \$10m spread over ten years).

Andrea Boltho

Andrea Boltho is a fellow of Magdalen College, Oxford.

BOOKS

Historians won over

When Governments Collide: coercion and diplomacy in the Vietnam conflict, 1964-80 by Wallace J. Thies. University of California Press, £12.00. ISBN 0 520 03962 9

Vietnamese Tradegy on Trial, 1920-1945 by David G. Marr. University of California Press, £17.50. ISBN 0 520 04180 1

Vietnam: the revolutionary path by Thomas Hodgkin. Macmillan, £25.00. ISBN 0 333 28110 1

All three of these books start with the question that still nags Americans: "Why did the communists win in Vietnam?" Their researches however, lead them into very different fields and periods of time.

Dr Thies's title is, at first sight, enigmatic: why use the term "conflict" rather than "war"? But his term is nicely chosen: the combination of skirmishing with desultory diplomatic demarches, initiated mainly by Washington but sometimes by Hanoi, was a method of conflict resolution sufficiently special to take it out of the realm of warfare. Consequently, he says very little about the fighting; all the space is devoted to blow-by-blow analysis of the two sides' negotiating postures and diplomatic campaigns during the period 1964-68. They were the years of the Johnson administration's escalation of its part in the conflict between the two Vietnams from aid-and-advice to military intervention, in reply to North Vietnam's decision to escalate its military action and make the most of South Vietnam's weakness after the overthrow of Ngo Dinh Diem engineered by President Kennedy.

Dr Thies uses his sometimes over-detailed research to argue that President Johnson might have resolved the conflict if he had paid attention to signs of division within the North Vietnamese ranks and cajoled Hanoi's "doves" into negotiating a second partition of Vietnam advantageous to the communists, and into constituting a coalition government over the rump of South Vietnam. In other words, the essence of conflict resolution is compromise. Dr Thies takes an arduous road to reach a commonplace.

Even if Dr Thies were not familiar with the Leninist tactics which were the acknowledged guide of all Hanoi leaders (whether "hawks" or "doves"), he had only to read the Hanoi press of those years to know that "tactical compromises" would have been welcomed by the communists - but only as a manoeuvre for putting an end to American intervention, and above all to bombing their military installations. The communists could only have acquiesced on terms that improved, not jeopardized, their ability to get possession of the whole South. Dr Thies raises the importance of the Ho Chi Minh Trail in North Vietnam's 1963 decision to escalate intervention; yet he leaves out of account the "compromise" effected at the second Geneva Conference in 1954, which put eastern Laos (through which the Trail circumvented the 1954 demarcation line between the two Vietnams) out of bounds, not only to South Vietnamese and American ground forces, but to Laotian government forces as well. That the Communist Party should ever have entered into a "strategic compromise", whose effect would be to renounce eventual monopoly of power throughout the country, was unthinkable.

The thoroughness that characterizes Dr Thies's research is also a hallmark of Dr Marr's book. Dr Marr was an intelligence officer in the US Army in Rolling-Thunder days whose heart-and-mind was won by the enemy. In this study he combines the intellectual history of Vietnam for the twenty years beyond the

span of his earlier study, *Vietnamese Anticolonialism*. He has delved through what must be the bulk of the Vietnamese-language literary output of his chosen years (upwards of 10,000 items) and distilled from it eight themes of intellectual development: morality, instruction, ethics and politics, language and literacy, the question of women, perceptions of the past, harmony and struggle, knowledge and power, and learning from experience. Religion and technical training are only considered incidentally, notwithstanding the impact on Vietnam of Catholicism (cause more than effect of colonial rule) and of modern technology - medicine, transport, publishing.

Dr Marr's study puts all previous accounts in the shade, partly because he has received indispensable help from the propagandist-historians of Hanoi and from officials of like mind at the Bibliothèque Nationale, an unequalled treasure-house of publications of the colonial period in Indochina. He has been allowed to reproduce some evocative title-pages and illustrations and has made some original discoveries; for example, he has unearthed a Vietnamese version of Bukharin's *ABC of Communism*, which was the Comintern's textbook on Marxism-Leninism, in a government file formerly at Hanoi.

Dr Marr admits the casuistic purpose which led him to start his research: he was looking for evidence of a more credible historical explanation for the triumph of the Indochina Communist Party over other Vietnamese parties than the practice of cynical Leninist doctrine as expounded by teachers like Bukharin. Although he stops short of attributing the party's victory to a single cause outright, he proceeds from the premise that the struggle was not over rival ambitions but between conflicting ideas. Each of his eight thematic chapters is presented as background to Vietnamese communist thought on the same subject, and the party leaders are portrayed as victorious because they were the product of intellectual debate and speculation nationally based inside Vietnam.

Court of basic rights

Federalism and Judicial Review in West Germany by Philip M. Blair. Clarendon Press: Oxford University Press, £22.50. ISBN 0 19 827427 0

The makers of West Germany's constitution of 1949 - the Basic Law - regarded a decentralized form of government as the palladium of justice and liberty. For reasons independent of the federal system the democratic character of West German government has never been in doubt or in danger since 1949. Regarded in the light of its original purpose federalism in West Germany is an irrelevance. It has emerged as an instrument not for safeguarding certain values but for allocating powers and functions between the national and the state (Land) governments. This development has produced what Konrad Hesse calls "cooperative federalism", a functional rather than a moral concept.

In line with this process the Bundesrat, the legislative organ of the Länder at national level, has lost its function as a brake on the central government and has come to share responsibility for national legislation as a true second chamber, though it lacks any democratic mandate for such an influential role. At the same time the Land governments have increasingly lost their autonomous functions and become administrative vehicles of the federation.

The task of integrating changes in circumstances such as these with the letter and spirit of the constitution falls to the Federal Constitutional Court. Dr Blair's book is devoted to two subjects: the evolution of the federal system and the jurisprudence developed by the constitutional court as a means of synthesizing it with the

The uncritical idealization of Vietnamese nationalism which results entails under-rating the beneficent influence on Vietnam, not only from France, but also from China. In the sphere of religion, for example, Dr Marr points out, alongside the rites and theologies of Buddhism, Taoism and Confucianism imported from China, the Vietnamese had many practices of humbler origin - animism, shamanism, divination - and marked them off from China. Not a bit: the religious world in China comprises the same duality. Dr Marr's basic misunderstanding arises from thinking of the common elements of culture as borrowings by Vietnam from China, whereas the relationship really arises from their belonging from the start to a single culture system.

The misunderstanding is greater in the field of language. In a long chapter, Dr Marr acknowledges a Vietnamese debt to Chinese in all ages for borrowings of learned vocabulary. He describes the politically-inspired modern efforts to avoid excessive use of obvious Chinese expressions wherever the vernacular offers an alternative, and his account of the debates about modernization of the language, and motives behind French education policy, is excellent. But again, the book misleads in its assumption that Chinese itself is a unitary language distinct from Vietnamese.

Dr Marr's aim to vindicate both Vietnamese nationhood and the Communist Party's embodiment of it is shared by Dr Hodgkin: "manning the barricades" in the party's cause, as he quotes from an earlier profession of faith by Dr Marr. A mature decolonizer of African history, he comes to his subject neither as an orientalist nor as an original researcher, but as a professional historian writing up materials to which he, in common with the other two authors, was introduced by the propagandist-historians in Hanoi, (where his daughter was employed as a translator). The product of this collaboration is a most presentable history book, certain to reawaken school

wide constitutional pattern. The work's core lies in thoroughgoing analysis of the decisions of the court in this field.

The book is stronger on analysis than on conclusions. The founders of German private and public law in the nineteenth century sought to construct law as an exact science founded on immutable principles. In the federal jurisprudence of the constitutional court, as presented by Blair, there are no premises from which deductions can be drawn with logical certainty. He repeatedly refers to the "extensive pragmatism" of the court and to its "considerable degree of eclecticism with regards to judicial method". On the other hand Blair also refers to the court's interpretation of the provisions of the Basic Law "in the light of what it regards as fundamental federal principles". Yet the dominant impression is that the court makes its mind up as it goes along and has - with the exception of its dramatic and notional self-assertion in the Television Case in 1961 - eschewed controversy because no federal issue is not ultimately worth powder and shot.

As Dr Blair admits, the more creative work of the Court lies in the area of basic rights. He sees, however, "no intrinsic relation between civil rights and federalism". Yet both the basic rights provisions of the Basic Law and federal provision alike were intended to embody the values of the political system. Because of its attendant dangers and incoherence, the state's lowest level is on an immutable ethical principles has now been effectively abandoned in West Germany, as in the doctrine of Western Europe, there is a rough balance between those who seek the preservation of the existing liberal order of society and those who seek some socialist society. In West Germany the defenders of the status quo have given up seeking to enforce a conservative interpretation of basic rights and have rallied instead round the federal system.

West Germany's federal system thus stands delicately poised between rival conceptions of society. This book presents a meticulous and gravely eloquent account of

and undergraduate interest in a subject neglected for lack of a suitable English-language text.

He deals first with the story from prehistory down to the first French administration in 1858 - not the complete history, but that of conflicts with China as told by the Vietnamese. He then covers the French period - again not the whole breadth but the social environment and events of "resistance movements" down to Dr Marr's opening date, the trial of Phan Boi Chau; and ends with a faithful account of victory of the Indochina Communist Party from its own point of view.

Authors of textbooks do not try to be original, and are often obliged to trust the accuracy of information derived from a single source. Dr Hodgkin, new to the matter he is handling and ignorant of peripheral matter such as the historiography of China, could not be expected to exercise much criticism in the interests of objectivity. Following Dr Marr, he quotes party officials as if their discursive were that of freethinking historians. It is true to say that nowadays readers look more favourably than they used to on the *parti-pris* of history in modern dress. But when one comes to the stirring epilogue, in which this modern Polydore Vergil's passionate enthusiasm for the triumph of Liberty over Oppression spurs him to condemn any who disagree with him as necessarily "western imperialist apologists" harbouring "vested interests" one may lament this fact about Vietnam scholarship: that all the recent basic research has been carried out by Marxist-Leninist aims - that scholars not so moved have not invested their energies, nor publishers their capital, in Vietnamese history-for-history's sake half as thorough as the Marxists' *Tendenzgeschichte*.

Jean-François Sirinelli contributes a concise and well-documented essay on the Ecole Normale Supérieure in the Third Republic. He shows that many university teachers and *académiciens* were *normaliens*, and then addresses himself to the difficult question about the extent to which the Ecole Normale provided a vehicle for upward mobility. His answer is a cautious yes. Certainly a large number of primary school teachers' children made it to the rue d'Ulm. Moreover, there is no doubt that many important men "made it" in two generations from the labouring classes (grandfather) via primary school teaching (father) to the Ecole Normale (son), and thence to the highest positions in the land: men such as Herriot, Jaurès, and of course later Pompidou.

In dealing with the Grandes Ecoles, Micheline Vaughan emphasizes the ethos at the Polytechnique, Ecole Normale (both going back to the revolutionary period) and the Ecole Nationale d'Administration (since 1945). This ethos is one of "service to the state", and it has not changed much since Napoleon's time. Republican France has always been more interested in equality of opportunity than in egalitarianism as such. The postwar attempts to "democratize" the Grandes Ecoles have largely failed, because elite institutions inevitably "attract the children of the elite", and such children are on balance bound to be better prepared for "meritocratic" entry to higher education than those from less privileged backgrounds. *Plus ça change, plus c'est la même chose*. Anne Stevens also emphasizes the ethos of ENA, its importance for entry into the *grand corps* and ministerial cabinets, and its general social value. All this is in a sense a distillation of the views of Birnbaum, Suleiman et al, but it is, like Jane Marceau and Ella Scars on business elites and ministerial cabinets, clear and valuable for students.

Among the interesting but less well-researched contributions are Jean-Pierre Rioux on elite changes at the Liberation; A. J. Perrie on the status of MPs (he detects a slight revival in their influence recently but sees them essentially as a "status" elite rather than a "power" elite); and Jill Lovecy on the Breton regional pressure group, CELIB. The remaining contributions are lightweight.

Overall, however, this should be a useful book for students - provided they are guided to the right chapters and skip the rest.

R. E. M. Irving

Dr Irving is reader in politics at the University of Edinburgh.

The sixth volume of the *Dictionary of Labour Biography*, edited by Joyce M. Bellamy and John Saville, has been recently published by Macmillan at £25.00. This latest volume deals with figures who were prominent in radical movements before 1850 and includes many Chartists, Owenites, socialists and publishers of unstamped newspapers. The book also includes sections on free speech and the "Cobdenite" and reports an 1848 article entitled "Woman's Industrial Independence".

The book consists of papers presented to a conference in 1980 and, like most such collections, is rather uneven; six papers are of high quality, while the rest vary from the interesting to the banal. One of the best is Ralph Gibson's contribution, the longest in the book. Gibson concentrates on a narrow topic, the Dordogne nobility in the nineteenth century; moreover his treatment is deflationary of "nobility" to those who were descendants of families who had voted with the order of nobility in 1789. However, his conclusions,

and undergrader interest in a subject neglected for lack of a suitable English-language text.

He deals first with the story from prehistory down to the first French administration in 1858 - not the complete history, but that of conflicts with China as told by the Vietnamese. He then covers the French period - again not the whole breadth but the social environment and events of "resistance movements" down to Dr Marr's opening date, the trial of Phan Boi Chau; and ends with a faithful account of victory of the Indochina Communist Party from its own point of view.

Authors of textbooks do not try to be original, and are often obliged to trust the accuracy of information derived from a single source. Dr Hodgkin, new to the matter he is handling and ignorant of peripheral matter such as the historiography of China, could not be expected to exercise much criticism in the interests of objectivity. Following Dr Marr, he quotes party officials as if their discursive were that of freethinking historians. It is true to say that nowadays readers look more favourably than they used to on the *parti-pris* of history in modern dress. But when one comes to the stirring epilogue, in which this modern Polydore Vergil's passionate enthusiasm for the triumph of Liberty over Oppression spurs him to condemn any who disagree with him as necessarily "western imperialist apologists" harbouring "vested interests" one may lament this fact about Vietnam scholarship: that all the recent basic research has been carried out by Marxist-Leninist aims - that scholars not so moved have not invested their energies, nor publishers their capital, in Vietnamese history-for-history's sake half as thorough as the Marxists' *Tendenzgeschichte*.

Jean-François Sirinelli contributes a concise and well-documented essay on the Ecole Normale Supérieure in the Third Republic. He shows that many university teachers and *académiciens* were *normaliens*, and then addresses himself to the difficult question about the extent to which the Ecole Normale provided a vehicle for upward mobility. His answer is a cautious yes. Certainly a large number of primary school teachers' children made it to the rue d'Ulm. Moreover, there is no doubt that many important men "made it" in two generations from the labouring classes (grandfather) via primary school teaching (father) to the Ecole Normale (son), and thence to the highest positions in the land: men such as Herriot, Jaurès, and of course later Pompidou.

In dealing with the Grandes Ecoles, Micheline Vaughan emphasizes the ethos at the Polytechnique, Ecole Normale (both going back to the revolutionary period) and the Ecole Nationale d'Administration (since 1945). This ethos is one of "service to the state", and it has not changed much since Napoleon's time. Republican France has always been more interested in equality of opportunity than in egalitarianism as such. The postwar attempts to "democratize" the Grandes Ecoles have largely failed, because elite institutions inevitably "attract the children of the elite", and such children are on balance bound to be better prepared for "meritocratic" entry to higher education than those from less privileged backgrounds. *Plus ça change, plus c'est la même chose*. Anne Stevens also emphasizes the ethos of ENA, its importance for entry into the *grand corps* and ministerial cabinets, and its general social value. All this is in a sense a distillation of the views of Birnbaum, Suleiman et al, but it is, like Jane Marceau and Ella Scars on business elites and ministerial cabinets, clear and valuable for students.

Among the interesting but less well-researched contributions are Jean-Pierre Rioux on elite changes at the Liberation; A. J. Perrie on the status of MPs (he detects a slight revival in their influence recently but sees them essentially as a "status" elite rather than a "power" elite); and Jill Lovecy on the Breton regional pressure group, CELIB. The remaining contributions are lightweight.

Overall, however, this should be a useful book for students - provided they are guided to the right chapters and skip the rest.

R. E. M. Irving

Dr Irving is reader in politics at the University of Edinburgh.

The sixth volume of the *Dictionary of Labour Biography*, edited by Joyce M. Bellamy and John Saville, has been recently published by Macmillan at £25.00. This latest volume deals with figures who were prominent in radical movements before 1850 and includes many Chartists, Owenites, socialists and publishers of unstamped newspapers. The book also includes sections on free speech and the "Cobdenite" and reports an 1848 article entitled "Woman's Industrial Independence".

The book consists of papers presented to a conference in 1980 and, like most such collections, is rather uneven; six papers are of high quality, while the rest vary from the interesting to the banal. One of the best is Ralph Gibson's contribution, the longest in the book. Gibson concentrates on a narrow topic, the Dordogne nobility in the nineteenth century; moreover his treatment is deflationary of "nobility" to those who were descendants of families who had voted with the order of nobility in 1789. However, his conclusions,

BOOKS

Time is money

The New Science of Organizations: a reconceptualization of the wealth of nations

by Alberto Guerreiro Ramos
University of Toronto Press, £17.50
ISBN 0 8020 5527 3

Alberto Guerreiro Ramos is an eminent Brazilian sociologist who has taught at the University of Paris, lectured in China, Yugoslavia and the Soviet Union, and is now professor of public administration at the University of Southern California. His book is devoted to the presentation of the conceptual framework for a new science of organizations.

Of course, a conceptual framework is not the science itself, but the scheme upon which the science will be created once someone gets around to creating it. I am restrained from making an orderly progress from the preface to the conclusion, in order to establish whether the middle is worth reading, by the injunction contained in the former: "The ten chapters of this book constitute an organic unit and must be read in the sequence they are presented, otherwise the reader will miss fundamental aspects of its conceptual thread." Having no wish to do so, I turn to chapter one.

Organization theory as it has prevailed is naive because predicated on the instrumental rationality inherent in western social science. I already know, from the preface, instrumental rationality has something to do with the "market-centered" model of society; in terms of which the individual is made essentially sensitive to economic inducements. "Instrumental rationality" presumably means that if you can sell it, it's okay. Or that what is not good for something other than itself, is no good.

This is soon contrasted with "substantive rationality", a distinction derived from Max Weber. As used by Ramos, I think instrumental rationality tells you how to do things, while substantive rationality tells you what ought to be done. The market becomes a self-regulated system, whose standards are socially given, and thus beyond the reach of common sense. The use of "rationality" by social scientists as well as laymen is now based on a profound bewilderment. The transvaluation of reason leads to the conversion of the concrete into the abstract, of the good into the functional. For those to whom the social science is suspect, these ideas will be sympathetic, though Ramos's prose is full of jargon and sociological terms that take a lot of chewing.

We are guided through the ideas of other critics. Marx went wrong in believing that the historical process of productive forces is rational in itself and thus emancipatory. Frankfurt puts the record straight, by showing how reason, as an agency of ethical, moral and religious insight, has been liquidated. Individuals are deeply socialized into the industrial system, whose instrumental rationality social science has transformed into a creed whereby market-controlled modernization is justified. The outcome: psychological insecurity, degradation of the quality of life, pollution and waste of the planet's limited resources.

On current organization theory, he is less kind to the human relations school than to H. A. Simon who presents a more realistic picture, but one still over-optimistic and uncritical. "It is presented in overly mechanistic terms and implies a loyalty to the organization which leads to - let us be frank - hideous existential outcomes."

It is Machiavelli on whose doctrines the morality of the organization is based. The "relationalism" of prince and citizen is demonstrated by the organization, unconcerned with truth, even in a relative sense. "He needs to understand the perspective of the 'ordinary citizen' in order to deceive him. The prince has to be virtuous by simulation, and able to induce the citizens to be good

through the 'wise' exercise of cruelty." Ramos's pages are illuminated by brilliant rhetoric that one cannot but applaud. This is clearly an important book in the development of organization theory. But in spite of having dutifully followed his train of thought through to the end, I remain unconvinced of the importance of the difference between instrumental and substantive rationality. "In the past people had plenty of opportunities to engage in genuine conviviality and personal endeavours, completely free from any relations with the market-place." In the latter, time is money, and Ramos devotes some pages to social differences in the interpretation of time. Of course, we drill our children from an early age to honour time and respect deadlines, but there are periods in subsistence economies, too, when time is of the essence. Planting and harvesting, weeding and watering are often times of intense activity. In hunting and fighting, every moment counts.

In industrial societies, the expropriation of time has by no means been complete. It has been fought for, it is true, hour by hour and minute by minute, but the working week has been substantially reduced and the annual holiday extended. So, within organizations, too, human nature asserts itself against the organization man in a multitude of ingenious ways. These are among the subjects that will have to be investigated in the researches that one hopes will follow from the present volume.

Guy Routh

Guy Routh has recently retired from teaching economics at the University of Sussex.

Patterns of trust

Good Industrial Relations theory and practice
by John Purcell
Macmillan, £15.00
ISBN 0 333 26114 3

It is a considerable testament to the power that the Donovan recommendations have exercised over the minds of academics concerned with industrial relations, that some 14 years after the report itself, and almost a decade after the appearance of some rather damning criticisms, a book concerned with "good industrial relations" should focus on the Donovan prescriptions. John Purcell's concern is with the deployment of the Donovan reform package by the Commission on Industrial Relations (CIR) in the early 1970s.

Purcell starts from the proposition that reformed bargaining structures cannot necessarily guarantee a reduction of conflict, and builds a complex model combining "trust dynamics" with structural configurations, and taking in the attitudes and expectations of participants. This model is claimed to be a major departure, it relies quite heavily on the work of Fox. Four ideal-typical patterns of industrial relations are characterized in a monumental 11-page table.

The bulk of the data to which this model is applied comes from four case studies, each approximating to one of the ideal-typical patterns. At Construction Hydraulics Ltd centralizing reform was impossible since, though mutually antagonistic, both sides were satisfied with existing sectional arrangements. The Electric Press Co succeeded in establishing centralized institutions, but these were insufficient trust for these arrangements to be vested with the authority and control envisaged by reformers. By contrast, at the High Tension Cable Co the involvement of the CIR was largely incidental to the development of a high-trust personalized bargaining relationship supported by formal centralized structures. Only at International Enterprises Ltd was the reform of structures associated with the heightening of trust, leading to "a substantial move towards industrial democracy through collective bargaining." All of these case studies are lucidly presented, free from the jargon which occasionally infects the model itself.

Purcell goes beyond his concern with these variables to indicate the fragility of high trust relations - whether formalized or not - under straitened economic circumstances. It is perhaps no accident, and a comment on changing problems of industrial relations more generally, that both high trust patterns succumbed to the harsher economic climate of the late 1970s.

There are occasional weaknesses in Purcell's presentation of his argument. For example, the High Tension Cable case tends to a description of the forceful personalities involved rather than the alleged informality which allows their influence. In addition, the strike figures he gives for this case study are difficult to reconcile with his account of the conflict. A more serious weakness is that although brief summaries conclude each chapter, there is no attempt systematically to present the author's views of the implications of these cases prior to his brief concluding chapter.

This conclusion is itself curious, and rather disappointing. It does not, as one might have hoped, indicate the relevance of findings from what are after all rather untypical cases to the search for good industrial relations in the 1980s. Nor does it offer a systematic reassessment of the model, which is the basis of the book. Rather, it consists of a tour through the works of a number of authors several of whom - such as Crouch, Ganson and Luhmann - have not previously made an appearance. The conclusions too are unsatisfactory. A crisis of conflict is often the major force for change, it is argued, when organizations have become unstable by entering "a regressive spiral of low-trust conflictual industrial relations." However, in both of the relevant cases, the short-lived high trust pattern was peculiarly susceptible to economic crisis, which appeared to set the regressive spiral off again. As the author recognizes, managers in the late 1970s were not convinced that the Donovan package contributed to efficiency; but the questions raised by this for future reformers are not confronted.

In fact, it is probably very difficult to offer recommendations for future reform from case studies such as these. Purcell has chosen to concentrate on the fate of a reform package devised with particular industries and a particular economic context in mind; even here, it was not wholly successful. This failure makes it a dubious starting point for future good industrial relations practice.

Paul Willman

Dr Willman is lecturer in the department of social and economic studies at Imperial College, London.

The power game

Corporate Control, Corporate Power: a Twentieth-Century Fund study
by Edward S. Herman
Cambridge University Press, £25.00
ISBN 0 521 23996 6

There is no doubt that the sheer size and scale of operations of the American business corporation is of continuing political and economic importance on a worldwide scale. There are now more American banks in London than there are in New York. General Motors, Ford and Chrysler retain a leading role in European car production, and American individuals and families are household names because of their business wealth and reputation; these are Vandebilt, J.P. Morgan and Henry Ford.

Alongside the power and reputation of American corporations and families there has been a rise of stakeholder and interest groups campaigning against companies. The campaign against the motor industry led by Ralph Nader gained an international reputation similar to that of the companies themselves, but there have also been government and congressional inquiries into the power of the banks and other corporate groups on a scale unequalled by the



Bronze statue of the deity Haribara (half Shiva, half Vishnu) from the fourteenth century, now in the National Museum, Bangkok. Taken from the Art of Sukhothai: Thailand's Golden Age, from the mid-thirteenth to the mid-fifteenth centuries by Carol Stratton and Miriam McNair Scott, published by Oxford University Press (East Asia) at £37.50.

UK. The Twentieth Century Fund itself has sponsored important research on the US corporate system and Herman's work is their latest product.

Ever since the work of Berle and Means in the 1930s there has been a continuing debate, in the UK as well as the US, about who controls large corporations. Berle and Means argued that the growth of corporations had led to a wide dispersal of share ownership, the decline of large owners, and an increase in the power of managers. They suggested that one of the implications of this could be to make corporations less devoted to pure profit maximization, unlike the owner-dominated companies.

Others have argued that there is still substantial owner or family control, or that financial institutions and banks control corporations through their power over stockholdings, or through directors on boards of companies, or through creditor relationships. Yet others have suggested that government now plays a major role in regulating and controlling (or "interfering" in) the general direction of corporate behaviour.

The overall purpose of the debate is to establish the power structure of American, or British, capitalism because of the different implications this can have for growth, political and economic power, abuse and social irresponsibility, and social conflict.

Herman embarks on a painstaking study of all the relevant hypotheses which these debates have produced. He examines the degree of owner, managerial, financial, and government control of the top 200 to 250 American companies. He bases his analysis on a concept of "strategic control" over decisions rather than looking at mere percentages of stock held. Herman also shows how control can change because of economic difficulties. He concludes that although control has shifted towards managements and away from direct control by owners and banks, corporations operate within a system of "strategic control" determined by financial institutions and owner influences.

The abuse of large ownership positions has declined as the direct control of the founding capitalists and bankers has declined. But although management control over corporate

Richard Minns

Richard Minns is the author of 'The Slow Funds and British Capitalism'

BOOKS

Nordic landscapes

An Historical Geography of Scandinavia
by W. R. Mead
Academic Press, £15.00
ISBN 0 12 487420 7

In presenting the historical geography of four European countries in about 100,000 words, Professor Mead has set himself a formidable task, given the vigorous contemporary output of Scandinavian historical geographers and economic historians and his own studies in this field over a academic lifetime.

Five chapters describe the geography of Scandinavia (including Finland, Iceland and the Atlantic islands) in 1250, 1650, 1750, 1850 and 1900; the changes that took place between and after these dates being covered in five generally shorter chapters, the last three of which are masterpieces of condensation. Each chapter includes a discussion of the general political situation, usually followed by sections about life on the land, mining and urban developments, although this pattern is not followed slavishly as topics are discussed in relation to their perceived importance at the time. Each stellar chapter concludes with a snapshot of the contemporary spirit of the age in Scandinavia. Mead is careful to identify differences in scale, distinguishing between Scandinavia as part of a wider Europe, national government views on change and the very different perspectives of individual farmers and townsmen.

The longstanding interest of Scandinavian scholars in measurement and the academic rigour of their doctoral theses tempt students of the area towards detailed description buttressed by somewhat indigestible statistics. Here the interest of specialist and non-specialist readers is retained through referencing rather than summarizing the studies on which the book is based and by transforming the source material into clear visual images. Medieval landscapes are described like verbal tapestries while the nineteenth century is illustrated through the eyes of its novelists.

Mead continually emphasizes the ways in which Scandinavians both observed and perceived their environment in the past through the direction of their scientific endeavour and their cartography. He does not neglect the myths which inspired their actions and moulded their perceptions but naturally classifies them by territorial scale.

Continuity is strengthened by the pursuit of two major themes in the geography of Scandinavia: the historical position of the northern European countries on the edge of European civilization and the extent to which their territories overstepped the margins of permanent agriculture. Slight climatic changes (which we can reconstruct but they could not be sure about) have disproportionate effects over large areas of Scandinavia where precarious harvests were felt all too keenly until the railways came to offer relief or mitigation. Mead shows how technology has always been more critical in the North than in better favoured lands and emphasizes the determinist framework which physical geography imposed on life in former times.

Only relatively recently have free traders from families and laborious ways together with the institution of free market economies enabled a wider potential for differences in life-style due to the comparative advantages of the most favoured areas.

As a geography, this book pays more attention to the land and what can be seen than to political and social structures. Indeed, Mead argues that there was little of either at the beginning of his story. The spread of change, generally northwards across the Scandinavian lands and from minor house to house, is discussed. Space relations within national states are implied rather

than specified.

Geographers and historians will be grateful for the substantial bibliographies of recent work from widely scattered sources in five languages. There are many clear maps and diagrams but the reader who is unfamiliar with Scandinavian topography will need a good atlas beside him to get full value from the text. This book should be savoured in the study rather than devoured on the boat to Gothenburg, but it can also be recommended to the general reader for it will extend his knowledge and stretch his imagination about both Scandinavia and the art of historical geography.

Brian Fullerton

Brian Fullerton is senior lecturer in geography at the University of Newcastle-upon-Tyne.

The story so far

The DNA Story: a documentary history of gene cloning
by James D. Watson and John Tooze
Freeman, £13.95
ISBN 0 7167 1292 X

Deoxyribonucleic acid, DNA, has been a focus of biologists' attentions since it was identified as the molecular determinant of heredity in 1944. Following the celebrated proposal in 1953 by Watson and Crick of the double-helical structure for DNA, progress in understanding the function of genes was rapid, as the complementary disciplines of microbial genetics and biochemistry unravelled the details of the transfer of genetic information into protein structure and the ways that this process is controlled in bacteria.

The exciting progress of molecular genetics slowed considerably in the late 1960s as the approaches that had been so successful with simpler organisms proved unsuitable or inadequate against the complexity of eukaryotic cells and their genomes. As stagnation threatened, the required stimulus was provided by the discovery of restriction enzymes that break DNA molecules into discrete, gene-sized segments and of the DNA ligases that can catalyze the rejoining of isolated fragments of DNA. The tools now existed for the isolation of any gene, transferring it by "gene-cloning" from a complex genetic environment into the very much simpler context of the bacterial cell. There it could readily be propagated to facilitate study of its structure and activity, or encouraged to function and allow the production of a medically or commercially important protein, perhaps a hormone or a vaccine.

The simple techniques for associating DNA sequences from unrelated species, while holding so much promise for the advance of molecular genetics, gave rise to concern that combinations of genes "with biological activity of unpredictable nature may be created", and that some such entities might "prove hazardous to laboratory workers and to the public". The fears of these conjectured hazards were aggravated by the fact that the normal host for recombinant DNA molecules was the bacterium *Escherichia coli*, strains of which commonly inhabit the human intestine. These considerations led rapidly to the establishment in the United States of a Committee on Recombinant DNA Molecules, whose first public act was the publication of a letter suggesting a world-wide moratorium on certain kinds of experiments with recombinant DNA.

The DNA Story is a detailed, first-hand account of the dramatic public debate that was triggered by that letter and became a major preoccupation of many molecular biologists and journalists over the subsequent six years. After a pictorial introduction to gene-cloning, the theme is developed chronologically through the reproduction of the relevant documents, correspondence and contemporary articles. Each chapter in the saga, which includes accounts of the key scientific meetings, public hearings, debates in the Cambridge (Massachusetts) City

Council and various "European side shows", is expertly introduced and summarized by the authors. Dr Watson and Tooze are eminently well qualified for this task, sharing expert knowledge of the scientific background, successful ventures into journalism and authorship, and protagonism in the original debate. Their expertise shows: the summaries are clear and readable, and their careful selection of the documentary evidence conveys a real sense of the tensions generated in the scientific community and the genuine unease of the conservationist lobby, encouraged by the support of several eminent biologists.

The DNA Story ends happily. Evidence accumulates that the fears are more imagined than real, and the restrictions on recombinant DNA experimentation are gradually relaxed to the point where they are no longer a serious impediment to research. Molecular biologists return to their laboratories, and a multi-million-dollar industry based on recombinant DNA technology is born.

Watson and Tooze have produced a valuable record of an unparalleled episode in the history of science. I can recommend it as fascinating and enjoyable reading to all those interested in science and its social relations.

W. J. Brammar

W. J. Brammar is professor of biochemistry at the University of Leicester.

Practical geology

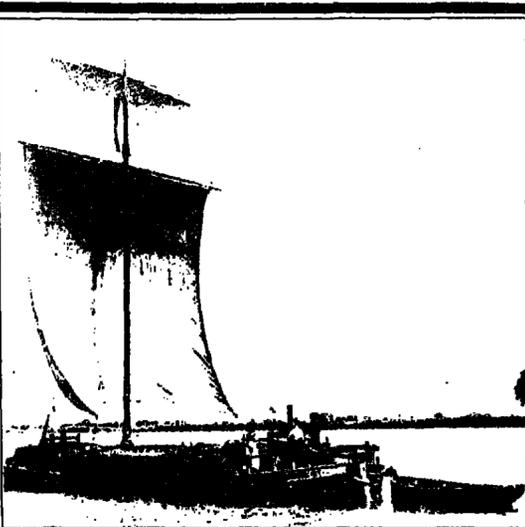
Methods in Field Geology
by Frank Moseley
Freeman, £12.00 and £6.50
ISBN 0 7167 1293 8 and 1294 6

In the late 1960s, a young New Zealand geologist working on early Proterozoic rocks in the fjords of the Godthab area in Greenland, found that he could distinguish a group of still older rocks whose history was longer than that of the surrounding gneisses. His results caught the imagination of the geological world, because they suggested that he had discovered rocks older than any previously known on Earth. Laboratories throughout the world competed for samples, which were analysed by every possible method. Much of what is known today about the early evolution of the Earth's crust has come from these studies of the Amitsoq gneisses.

The story of Vic McGregor's discoveries helps to explain why students of geology are required to learn the methods of field geology. The scientific advances that followed recognition of the significance of the Amitsoq gneisses were made possible by the quick eye, insight and staying power of a solitary geologist working in a rugged terrain and equipped with no instrument more sophisticated than a compass. The same qualities are needed by those concerned with more practical ends, such as the stiling of a dam or the discovery of an ore-body, where success often depends on a correct interpretation of structure.

Most students receive some formal instruction in field techniques before they are required to embark on a solo mapping exercise. To a large extent, however, they have to pick up the tricks of the trade by trial and error or, if they are lucky, by watching more experienced field geologists at work. Everyone will be helped, therefore, by *Methods in Field Geology*, a down-to-earth practical manual, written by an author alert to the needs of those with little experience.

The first part provides a general introduction to such matters as equipment, use of aerial photographs, methods of recording data, and the preparation of a final map and report. The longer second part illustrates different ways of mapping by reference to a number of areas chosen to cover the widest possible range of geological problems. All the areas are known to the author and nearly all the figures are drawn from his own maps and notebooks. The text is clear and unpretentious, and the numerous figures - informative and



A Humber keel on the River Trent in about 1910. An ancient type of craft dating back to medieval ships, the keel was mechanized in the nineteenth century by the addition of nine windlasses for handling the sails, making it well suited for use in confined waters. Taken from Britain's Maritime Heritage by Robert Simper, published by David and Charles at £11.95.

well chosen. The strong personal element gives the book a distinctive, occasionally idiosyncratic, flavour; and I would disagree with some of Dr Moseley's emphases. The use of aerial photographs and of photography in the field gets a lot of attention, the contents of the field notebook and the construction of measured sections a good deal less. Metamorphic and igneous terrains are rather briefly treated and the confident statement that metamorphic structures "are generally easily seen on air photographs" would raise a wry smile in some readers. However, these comments do no more than express the diversity of interests and experience among field geologists. The important thing is the real good that the book is likely to do.

Practical geology

Methods in Field Geology
by Frank Moseley
Freeman, £12.00 and £6.50
ISBN 0 7167 1293 8 and 1294 6

In the late 1960s, a young New Zealand geologist working on early Proterozoic rocks in the fjords of the Godthab area in Greenland, found that he could distinguish a group of still older rocks whose history was longer than that of the surrounding gneisses. His results caught the imagination of the geological world, because they suggested that he had discovered rocks older than any previously known on Earth. Laboratories throughout the world competed for samples, which were analysed by every possible method. Much of what is known today about the early evolution of the Earth's crust has come from these studies of the Amitsoq gneisses.

The story of Vic McGregor's discoveries helps to explain why students of geology are required to learn the methods of field geology. The scientific advances that followed recognition of the significance of the Amitsoq gneisses were made possible by the quick eye, insight and staying power of a solitary geologist working in a rugged terrain and equipped with no instrument more sophisticated than a compass. The same qualities are needed by those concerned with more practical ends, such as the stiling of a dam or the discovery of an ore-body, where success often depends on a correct interpretation of structure.

Most students receive some formal instruction in field techniques before they are required to embark on a solo mapping exercise. To a large extent, however, they have to pick up the tricks of the trade by trial and error or, if they are lucky, by watching more experienced field geologists at work. Everyone will be helped, therefore, by *Methods in Field Geology*, a down-to-earth practical manual, written by an author alert to the needs of those with little experience.

The first part provides a general introduction to such matters as equipment, use of aerial photographs, methods of recording data, and the preparation of a final map and report. The longer second part illustrates different ways of mapping by reference to a number of areas chosen to cover the widest possible range of geological problems. All the areas are known to the author and nearly all the figures are drawn from his own maps and notebooks. The text is clear and unpretentious, and the numerous figures - informative and

strained maxima and minima, in which the role of the eigenvalues of the symmetric matrix representing the second derivative is clearly set forth; second, maxima and minima subject to constraints, that is, the theory of Lagrange multipliers; and third, a lucid and tantalizing glimpse of the Kuhn-Tucker theory, in which the constraints are given by inequalities. As this latter theory is of increasing importance in mathematical economics and optimal control theory, such well-written introductions should form a standard part of any real variables course.

A final chapter deals with Integration and differential forms, concluding with Stokes's theorem. The last two chapters provide suitable suggestions for further reading, and a number of appendices present the necessary background material, mostly elementary algebra and topology.

Bavandad and Liebeck's book has a slightly more sophisticated approach, as its title indicates, and is somewhat more leisurely in style. Although again many illustrations and numerous worked examples are provided, the authors give slightly more emphasis to topological considerations. After the introduction of the algebraic preliminaries, chapter two deals with curves and differential geometry in n -dimensional space; chapter three with Taylor's theorem and maxima and minima; and chapter four with the chain rule, the inverse function theorem and the implicit function theorem. The theory of constrained maxima and minima is also briefly considered. Presentation of topics and general layout are again admirable.

Both books benefit immensely from being modest in scope. The sophisticated reader will search in vain for terms like Lebesgue integral, Hilbert space and Baire category.

The notion of compactness, so crucial in any subsequent course, is only briefly alluded to. All this is bound to appeal to a generation of undergraduates which seems to have adopted, with enthusiasm, the following lines from the well-known hymn "Lead Kindly Light" as its motto: "Keep Thou my feet; I do not ask to see / The distant scene, one step enough for me." From a mathematical viewpoint this attitude has much to commend it in the first instance.

The student who has worked his way through either of these books will have had a good introduction to the difficulties encountered in carrying out some of the well-known theorems of calculus over into higher dimensions. He or she will then be in a position to take more advanced courses in real or functional analysis or differential geometry.

J. M. Anderson

J. M. Anderson is lecturer in mathematics at University College London.

Universities continued

NEW ENGLAND THE UNIVERSITY OF CENTRE FOR ADMINISTRATIVE AND HIGHER EDUCATION STUDIES... CIVIL ENGINEERING LECTURESHIP... Applications are invited from suitably qualified candidates for a lecturing post in the Department of Civil Engineering.

Colleges of Higher Education

BOLTON METROPOLITAN BOROUGH Bolton Institute of Higher Education (RE-ADVERTISEMENT) Vice Principal... Applications are invited for the above post in this new institution to be formed in September 1982 by the merger of Bolton Institute of Technology and Bolton College of Education.

London Business School Lecturer in Economics

Applications are invited for the post of Lecturer in Economics at the London Business School. The successful applicant will be expected to join in the teaching of industry analysis and micro-economics on our postgraduate post-experience Master's programme.

Research and Studentships continued

LIVERPOOL UNIVERSITY OF DEPARTMENT OF COMPUTATIONAL AND STATISTICAL SCIENCE... SUNDERLAND POLYTECHNIC Faculty of Education and Humanities... Applications are invited from candidates with several years experience in design and development for a post of Research Assistant in the above Department.

CALIFORNIA UNIVERSITY OF IRRVINE DEPARTMENT OF MATHEMATICS

A senior position at the level of Full Professor in available for 1982-83. Rank and salary negotiable. Rank and salary negotiable. Rank and salary negotiable.

HULL THE UNIVERSITY OF DEPARTMENT OF ADULT EDUCATION... Applications are invited for a post of Lecturer in Regional and Local History with special interest in the medieval history of the North East of England.

MANCHESTER THE UNIVERSITY OF TEMPORARY LECTURER IN POLITICAL THEORY... Applications are invited for this post in the Department of Government for one year from October 1982.

LONDON EDUCATION AUTHORITY SOUTH WEST LONDON PROFESSIONAL DEPARTMENT

Required as soon as possible: Senior Lecturer to teach Taxation up to and including the Final Level of the syllabus for the Institute of Certified Accountants.

Overseas

The British Council, a publicly funded body whose aim is to promote an enduring understanding and appreciation of Britain in other countries through cultural, educational and technical co-operation intends to recruit a small number of staff to its Overseas Career Service in 1982.

SCHOOL OF ENGINEERING DARLING DOWNS INSTITUTE OF ADVANCED EDUCATION QUEENSLAND

Lectureship in Mechanical/Agricultural Engineering (Ref. No. 7079) The Darling Downs Institute of Advanced Education is a major Australian regional college situated in Toowoomba, a city of 75,000 people.

Polytechnics

The Polytechnic of North London ASSISTANT DIRECTOR... The person appointed will initially have senior management responsibility for personnel matters and industrial relations in the Polytechnic.

Personal

IMMEDIATE ADVANCES \$100 to \$20,000... For further details please write to the Registrar, University of Leicester, University Road, Leicester LE1 7RH.

Home exchange

FLORENCE Teacher offers to change modern flat for London accommodation (two bedrooms) for 3/4 weeks between 1st-30 August. Tel: 01-262 182-1846 for reference. F 24 17,884.

Colleges and Departments of Art

ilea Inner London Education Authority CANNIBREWELL SCHOOL OF ART AND CRAFTS... Applications are invited for the newly established post of HEAD OF DEPARTMENT ART HISTORY AND CONSERVATION.

Colleges of Further Education

London Business School Lecturer in Organisational Behaviour... Applications are invited for the post of Lecturer in Organisational Behaviour. The successful candidate will have teaching experience, a developed area of research in the social sciences and professional knowledge of Business or the Public Sector.

Administration

Queen Mary College Students' Union ADMINISTRATIVE OFFICER... Applications are invited for the post of Administrative Officer from suitably qualified and/or experienced persons.

Research Studentships

LIVERPOOL UNIVERSITY OF DEPARTMENT OF COMPUTATIONAL AND STATISTICAL SCIENCE... Applications are invited from candidates with several years experience in design and development for a post of Research Assistant in the above Department.

Overseas Career Service... The British Council, a publicly funded body whose aim is to promote an enduring understanding and appreciation of Britain in other countries through cultural, educational and technical co-operation intends to recruit a small number of staff to its Overseas Career Service in 1982.

The Times Higher Education Supplement

SPECIAL BOOK NUMBERS FOR 1982

- APRIL 16 History (I)
23 Psychology (I)
30 Engineering
May 7 Philosophy
14 Chemistry
21 Law
28 American Studies
June 4 Geography
11 Social Administration
September 17 Education (II)
24 Economics (II)
October 1 Biological Sciences (II)
8 University Presses
15 English (II)
22 Sociology (II)
29 Maths & Physics (II)
November 5 History (II)
12 Psychology (II)
19 Politics
26 Computer Science

Special Features for 1982

- June 25 Computers in Higher Education
July 2 Education and Training
September 10 Higher Education in the Common Market
October 8 Academic Journals

Don's diary

Monday

Tyres squealing, Don accelerates through the roadblock doing 80, a sardonic smile creasing his face as the men dive out of his path. As the bark of machine gun fire fades, the mirror shows two powerful motorbikes, riders hooded and masked, closing up rapidly. Don's smile broadens as, with casual skill, he flips the car through the next corner.

Well, no, it wasn't quite like that. Edging forward in line to the cluster of hored soldiers, with their incongruous accents, for the search one could hardly dignify with the term wanderer. Road blocks aren't all that common, even here in Fermanagh, and one can understand why; it is a little improbable that hardened IRA men will confess all at the mere sight of a uniform, so the only real function of stopping the traffic is to irritate ordinary drivers. I'm on my way to Lisnakea, a small town a few miles from the border, a weekly visit to supervise students doing school practice. It's a round trip of nearly 200 miles, so a long day with a very early start, but the drive in early spring through the unending soft green of the Ulster countryside, and the unfurling hospitality of the teachers and children in the schools I visit is ample compensation.

Tuesday

Teaching. Primary school teachers are being made redundant all over Northern Ireland at present, so it's a bit depressing working with students whose chances of getting a job in school are rather slight. It's not much fun for them, either; in fact it's not easy for any of our graduates in a province where the unemployment rate is more than 30 per cent in places. Some of our graduates from last year are still jobless; one, a bright and lively young woman, who would make an excellent teacher, wrote to me only recently; "I'm beginning to think I'm some kind of useless freak. Is it my interview technique, my qualifications, or just me? I've been to Dublin and Belfast so often for interviews that I've lost count - along with time, energy and money." What are we doing to our young people that they begin to think of themselves as useless freaks? We're told that in the medium to long-term prospects as far as primary schools are concerned are much better. The birth rate's going up, so in a few years' time everyone will probably be crying out for teachers again. But for this generation it may be too late.

Wednesday

Early start again, to Derry to see more students. A magnificent scenic drive over the hills, with wonderful views over the Foyle to rugged Donegal. On a lovely sunny day like this nothing would induce me to return to the muck and grime of south London. One little school I go to out in the county beyond Derry was so short of space that the parents most imaginatively bought an old single-decker bus, re-equipped it, and donated it to the school. It sits in the playground, and is made good use of; but it's also a dismal comment on our current financial priorities that qualified and experienced professional people (not to mention the children) a battered estate on a windy hillside. A graffiti catches my eye: "If Bobby Sands was a murderer, so are all our war heroes". I ponder the ethical implications, but decide that the scrawl on a Belfast wall referring

to a little-lamented former Secretary of State as "Mason the Mad Midget" is perhaps more effectively pithy.

Thursday

The University's Open Day. Hundreds of neatly uniformed sixth-formers from all over Northern Ireland mill around the campus, enjoying a day out of school. I'm manning an exhibition in one of our teaching areas. All good public relations, I suppose, although it might be instructive to investigate its actual effectiveness in terms of future entrants.

Long ago I was asked to drive the university badminton team down to Dublin in a minibus this evening for the Irish Inter-Varsity Championship lasting until Sunday. I agreed, it being a long time ahead, but now I wish I hadn't as I'm terribly busy. When I was teaching in school if I had a day's absence, even for some moderately plausible reason like a broken leg or amoebic dysentery, I always felt uneasy because I knew that a colleague would get lumbered with my class as well as his or her own. I think this may account for the fact that even now I hate taking a day off during term time, and do so very rarely; or perhaps if I didn't live in these parts I would put it down to the Protestant ethic. Anyway, I shall feel guilty tomorrow. Drive to Dublin.

Friday

Feel guilty. Team is slaughtered on court by all and sundry, partly because I play like a zombie. But Dublin's a good place for drowning sorrows, and the crack is good, as they say here. By the evening, immersed in an expensive alcoholic haze (the famous dark brew is over a pound a pint) I feel much more cheerful.

Saturday

More slaughter. The team from Queen's in Belfast, who take it all very seriously (and also play very well) win the tournament easily. We finish fourth out of six, which is as good a result as we could expect. Our hosts, the team from Trinity College, are a most sociable crowd, and Dublin in general seems a very civilized place, apart from the homicidal streak in all its motorists. I go to look at the marvellous illustrated manuscripts (including the Book of Kells) in Trinity's library before setting off in the evening for the dinner and dance for all championship participants in a Dublin hotel. It's a good excuse for more imbibing, although I must be the oldest person present, and by now I'm feeling it; the pace is too hot for me, and I retire to bed before midnight. The rest of our team enroute for most of the night, and good luck to them, although waking me up at half three for practice jokes is going a bit far.

Sunday

Drive home, feeling knackered, but I enjoyed it. Spend the afternoon in the university, working as penance. Try without much success, to get myself into a fit state for Fermanagh again first thing tomorrow. Hardly a typical week, but at least I've managed to write a whole week's diary without even mentioning the dreaded word Ch-iv-r.

Stuart Marriott

The author is lecturer in primary education at the New University of Ulster.

Benefits of a delayed beginning

An increasing proportion of young people are taking a year off between school and higher education. They are taking a job or a series of jobs and indulging in a little foreign travel when they have saved enough money to escape from Britain.



Tessa Blackstone

"Twenty years ago I did the same. It was forced on me by circumstances, not because I had had the foresight to work it out as a desirable strategy. I changed my mind about what I wanted to study. Being asked for scholarship level French to read every play that Moliere wrote and write synopses of the plots without even some fellow pupils with whom to share this penance - was enough to put me off modern languages.

Not even Mademoiselle de Malstre the delightful *assistante* whom I read passage after passage aloud, playing every part like a one woman Max Wall while she acted as a patient prompt when I failed to get my tongue round some particularly difficult seventeenth century phrase, could dissuade me from my determination to switch to sociology. By then LSE had filled its places for the coming year so I had to wait. What at the time I thought was a misfortune turned out to be a great benefit.

I knew very little about life at the beginning of that year and quite a lot more about it at the end of it. I found out what manual work was like, even though in typically female occupations as a waitress and a shop assistant. I learnt something about "hard-sell", as a telephone sales-girl for Joe Lyons, where I made 70 phone calls a day to village shops, supermarkets and cinemas, beginning brightly with "Lyons' Malt here, can I take your order?" and learning to fob off the jokers who played on the other meaning of malt.

For the first time I lived away from home and discovered what can befall the victims of provincial landladies. I earned very little and went without lunch to have more left over for more frivolous things than food. In Protestant Germany and Catholic Spain, where I was employed as a governess by wealthy Sevillians, I was immersed in two very different European cultures. Above all I had a good time. I read a lot. I met people from a much wider range of social backgrounds than my middle-class home and grammar school education had allowed.

I have often wondered how I would have fared at LSE without these experiences. Not too well I

fear, at least at the outset. The process of adjustment would certainly have been harder. Ten years of teaching undergraduates at that institution persuaded me that my experience was not unique. As a general rule it was undoubtedly the case that the students who had knocked about a bit coped much better with both the intellectual and social demands of higher education and they were enjoyed it more. A breather from academic work tended to mean they were fresher and more anxious to get back to it than those who had just escaped the treadmill of A Levels. Moreover their greater maturity meant they were often better at working on their own and their wider experience meant they had more ideas to bring in the way of their own ideas to the subjects they were studying. This is particularly important in the social sciences and to some extent the arts.

Although more young people are starting to recognize these advantages, it is clear that influential adults, including parents and teachers, quite often discourage them from delaying the start of their studies. One argument used is that they will lose the habit of studying, when the reverse is more often true.

Another is that once they get a nearby Southend) with a complete list of the 300-odd different classes run by its adult education department. The inspectors cheerfully told them that it looked as though up to two thirds of their classes could be liable to 15 per cent tax.

But why should a publicly funded service like adult education be liable to VAT? The tax seems to be being applied to courses which are self-financing or make a profit unless in the words of the VAT bible (the 1972 Finance Act) they offer education "of a kind provided by a school or university".

This means that in Essex for example, O level maths or English will be exempt, but flower arranging and yoga will not. Added anxiety has been caused by the fact that the Customs and Excise officers are taking it upon themselves to judge what is "educational" and what is considered merely of recreational value.

This attempt by outsiders to make educational distinctions has caused considerable ire in adult education circles, notably in the Advisory Council for Adult and Continuing Education, the National Institute of Adult Education and the Educational Centres Association. A meeting between the Department of Education and Science and Customs and Excise ended with the latter agreeing to tread carefully and not take the words of the Finance Act too literally. Instead local inspectors seem to have gone right over the top.

Charlotte Barry

The dreaded VAT inspectors are now putting the fear of death not only into small business owners and shopkeepers but also adult and community education centres up and down the country.

From Grantham in Essex, the inspectors are swooping on selected colleges and centres and threatening to levy Value Added Tax on non-vocational adult education classes as well as sports and leisure facilities.

Education for Adults

Since 1979 have been telling their adult education services to become self-financing. This means the fees charged to students must cover teaching costs, materials, equipment and accommodation.

job or start trekking to Kathmandu they will never want to come back to higher education. Most of the jobs which are hardly likely to satisfy them for long. And the glamour of Kathmandu will be tempered by a fair amount of material deprivation on the way there and back. A couple of nights in a Peshawar doshbong not so long ago, sharing the hard mattresses in the dormitories and communal tap on the roof outside with the student overlayers was enough to convince me that the relative luxuries of the student hall of residence and three meals a day would certainly entice them back.

More recently two other fears have been expressed. The first is that they will not be able to get a job because of youth unemployment. The second is that university can be stepped up and getting a place later will be even more difficult than it is now. These are much more legitimate fears than the ones expressed above. Even so, do they justify the advice that students should go straight into higher education?

First there are still some jobs to be had even if they are often disagreeable and poorly paid and particularly if future students are prepared to travel to get to them. Where they fail to get employment there is the alternative of voluntary work in the community plus supplementary benefits - second-best perhaps, but still valuable experience which may justify delayed entry. Second it is possible to apply for university or polytechnic and defer entry until securing a place in advance. Higher education institutions will rarely nege on an offer once made; it is the students applying the following year who are more likely to lose out if further cuts are made.

Universities and polytechnics ought to do more to encourage deferred entry. They should tell prospective students that they will find preference to those who go and find out more about the world so that they arrive to study more like young adults and less like older adolescents. And perhaps the Government should put maintenance grants on a sliding scale which would be worked, up to five years age, rather than giving a full grant to those who have worked for three or more years and not differentiating between the 18-year-old with no work experience and the 20-year-old who has had two years employment?

(b) That the failure of the Select Committee to interview any representatives who are teaching the subject in schools (as compared for example, with the teaching of mathematics) has led the committee in its report to quote the views of church representatives concerning the subject in county schools. While

espionage, outbreaks of fire and other risks and accidents, without proper on-the-spot supervision. Are laboratories insured? If so, what insurance companies find practice acceptable in respect of laboratories which may clearly pose serious additional hazards - explosive chemicals, radioactive material, potentially dangerous pathogens and the rest? Are those who should be concerned (the DES, the Health and Safety Commission, trades unions) actively seeking improved standards of laboratory security (besides safety)?

It is my experience that many (if not all) university laboratories (and studies associated with them) - and I emphasize that I do not know the local conditions at Southampton - are left woefully unattended outside normal working hours by any responsible security officer(s).

Such laboratories are thus liable to break-ins and theft (which nowadays may include commercial or industrial

LETTERS TO THE EDITOR

Chilver's aura of inefficiency

Sir, - Predictably Mr McGill used the most damaging-looking statistics from the Chilver report concerning the New University of Ulster (THES March 26). Your readers should know however that among numerous "mistakes" the Chilver report's staff/student ratio of 1:3.3 in biology would read at least 1:6.7 on the basis of undergraduates alone. The actual figures for the current year are as follows:

Undergraduate Biology/Ecology students	74
Postgraduate (D.Phil.) students	17
Part-time M.Sc. Students	16
Teaching staff	11

Religious Education Sir, - The National Religious Education Council of England and Wales welcomes the following recommendations of the Select Committee on Education, Science and Arts: the formal change of name to Religious Education (Recommendation 14); the appointment of more properly qualified religious education teachers and inspectors (Recommendation 17); and the preparation of revised religious education syllabuses (Recommendation 18). It would hope to be included in the discussions which the Secretary of State is asked to begin, regarding guidelines to schools on the school act of worship and the possibility of legislative changes (Recommendation 15).

It wishes however, to express its concern on four matters:

(a) That 10 years after the report on *The Recruitment, Training and Employment of Religious Education Teachers in England and Wales* (produced with the support of the Department of Education and Science) there is hardly any improvement in the provision of properly qualified religious education teachers in schools. In view of the difficulties regarding school staffing over the last 10 years it would stress the urgency for Her Majesty's Government to impress upon i.e.s the need to safeguard the appointment of properly qualified religious education staff, when vacancies occur, and not to differentiate between the 18-year-old with no work experience and the 20-year-old who has had two years employment?

(b) That the failure of the Select Committee to interview any representatives who are teaching the subject in schools (as compared for example, with the teaching of mathematics) has led the committee in its report to quote the views of church representatives concerning the subject in county schools. While

Laboratory Insurance

Sir, - You report (THES, March 19), "A fire in a medical laboratory at Southampton University has caused hundreds of thousands of pounds worth of damage and put back the work of research students by several years."

It is my experience that many (if not all) university laboratories (and studies associated with them) - and I emphasize that I do not know the local conditions at Southampton - are left woefully unattended outside normal working hours by any responsible security officer(s).

Such laboratories are thus liable to break-ins and theft (which nowadays may include commercial or industrial

We also contribute to courses in environmental science (79 students), biology chemistry (31 students) and medical laboratory sciences (9 students) as well as running intensive training and extra-mural courses.

The Chilver review group failed to grasp the statistical implications of a modular course structure but Mr McGill should have known that UGC unit cost data demonstrate that the NUU figures are within one per cent of the national average for comparable universities.

Chilver's data and recommendations were rightly repudiated by the minister but it is unfortunate that the

supporting and welcoming the points made by those representatives, it is seriously concerned about the implications in para 5.40, that there is "ambiguity" regarding the provision of examinations in religious studies; (as distinct from religious education); not only is there abundant evidence that both the status and the future recruitment of teachers to any subject are confirmed by its presence within the examination curriculum, but also the development of public examinations in religious studies during the last 15 years in county schools (in both GCE and CSE) has been supported professionally and by careful research.

(c) The need to take full and careful attention of religious aspects of multicultural education, in all the proposals affecting multi-cultural, multi-racial or multi-ethnic matters. The council contains within it a large number of bodies representative of or experienced in, ethnic minority education; the Religious Education Council has already discussed this matter at its meetings and would be happy to facilitate further discussions and development in the religious education aspects of multicultural education.

(d) Although recommendation 54 does not reflect a specific discussion on the failure of i.e.s. or schools to implement the religious education courses of the 1944 Education Act. Nevertheless the Religious Education Council would welcome the opportunity for the Secretary of State to intervene when necessary agreed provision within religious education appears to be at risk locally, if all other procedures failed.

Finally the National Religious Education Council of England and Wales would welcome the support of all Members of Parliament in developing the subject.

Yours faithfully,
ALAN COOPER,
Research Fellow,
Centre for Library and Information Management,
Loughborough University.

which permits such discrimination in favour of overseas applicants provided "do not intend to remain in Great Britain after the period of education" here.

Yours sincerely,
ROY DYCKHOFF,
Applications,
Section 36 of the Act,
5, Park Street, St Andrews, Fife.

Short-term political aims

Sir, - I refer to your article "Where F.E.'s Weaknesses Lie" (THES, March 12). The report in question *Colleges of F.E.: Guide to the Measurement of Resource Efficiency* briefly surveys the F.E. structure and proceeds to make recommendations about the kinds of managerial control and practice which would be desirable and efficient. In that respect the report is a useful one.

It is a cause for concern in other directions. The report has come at a time when rumours are rife about the future funding of education. There is increasing speculation that education will cease to be even partially funded from the rates - the *Education Guardian* (March 16) expressed five alternatives. Another dimension is the sparring and jostling between the DES and the Department of Employment primarily over provision for unemployed youngsters.

Their impact is to create confusion and uncertainty, unnecessarily so. They highlight two main weaknesses in the education arena. One is the level of analysis which is felt to be appropriate in confronting policy issues. There is an apparent reluctance to approach analysis from a level which transcends the internal boundaries of the education system.

The youngster moving from junior school through secondary and on to higher education is rarely seen as the same individual developing and maturing with needs, some consistent others emerging at points along the way.

To respond to youngsters' needs collectively and individually requires approaches which appear to be lacking. As a result there is often little encouragement for cooperation between the secondary and further education sectors and little joint planning. At another level the audit report establishes a framework for the analysis of the efficiency of FE. It concedes no comparative analysis of the efficiency of FE. It concedes no comparative analysis with schools responsible for the same age group and often affording similar opportunities. None is planned, I understand.

A second weakness is also highlighted by the report. Analysts often take a functional technical or professional approach, and invariably ignore issues which ought to be central to the analysis. The report measures inputs in terms of (a) lecturer contact hours with students, (b) attendance hours of all staff academic and non-academic, thus conveniently ignoring the nature of space, equipment, work undertaken away from the college and community supports of various kinds.

The interpretation of outputs is equally narrow - namely - a) student taught hours B) examination success since an increasing number of students take courses of a vocational as well as of a non-examination nature which are non-examinable. The work of colleges in the area of the young unemployed apparently yields no outputs.

The report further assumes that efficiency is the key to judging a college's work. Efficiency is desirable but only if the objectives are appropriate. There is evidence that some colleges may be efficient, but their aims may be questioned. High examination pass rates, for example, can be achieved by placing students on the wrong courses. The report should be more concerned to increase efficiency in the context of effectiveness.

The resistance of some politicians to concerning themselves with effectiveness is perhaps justifiable to those with short-term political horizons. Those responsible for advising them, fall to exercise that responsibility when they make little effort to a range of levels of analysis or when they place blunt instruments in the hands of politicians.

JOHN SKITT,
Vice-principal,
Barnet College, Barnet, Herts.

Union view

The route to parity of esteem

"Do you remember that CNAA visit when...?" Every polytechnic has a fund of stories about the CNAA and some of them are true! Most reflect the problems of a body which is both powerful and diverse in its composition. Most lecturers will welcome the announcement that CNAA has set up a working party to review its functions as a course-revalidating and degree-awarding body.

Any changes brought by the review could have important implications for the polytechnics, whether opportunities for improving their status and efficiency or dangers for the standards which the institutions, with the support of CNAA, have fought for.

It may seem ironic, in view of the criticism to which the council has been long subjected, that most lecturers in polytechnics are convinced that the beneficial influence of the council on their courses must be retained.

There are two main questions which should exercise the working party. They are:

Should the validation of courses and qualifications be linked to the award of those qualifications?

Should validation be concentrated on course content or on resources?

The working party will presumably review the benefits of retaining the degree-awarding function and also those which might follow if it were transferred to institutions. The transfer of the awarding function from CNAA to the institutions could have advantages - some administrative, some for the status of the qualifications and the institutions but others for the total activity of this major sector of higher education.

The thrust of the validation process at a time of cuts in educational spending may need to change. Often it has seemed that the validation of courses in mature institutions still involves unnecessarily detailed examination of course content and purpose.

It may be argued (and the Council of Local Education Authorities has done so) that it is not within the competence of CNAA to monitor the level of resource provision. Yet the quality of a course, its development, its value and its attraction for students and employers, depends on the resources which sustain it, and in the polytechnics, these resources have been consistently below those of the universities. They have severely declined and are among the lowest per graduate in the western world.

In the setting up of the National Advisory Body for Local Authority Higher Education, there has been argument over the role of CNAA - whether it should be closely involved with resource allocation or whether it should act independently. The re-legation of the representation of Council to the board rather than the committee of the NAB, and then only at the same level as that accorded to the CBI and the TUC, has indicated a separate function for the CNAA, a function which must be corrective of the funding decisions of the NAB. In such a context, the role of the CNAA seems clear: yet it may require courage for them to exercise that role boldly.

For parity of provision is still the best route to parity of esteem and of qualifications and it cannot be replaced by a side track consisting of detailed examination of what would be done if the resources were available.

Dr Hugh Mason

The author is secretary of the education policy panel of the Association of Polytechnic Teachers.

Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

Dr Hugh Mason

The author is secretary of the education policy panel of the Association of Polytechnic Teachers.

Dr Hugh Mason

The author is secretary of the education policy panel of the Association of Polytechnic Teachers.

Dr Hugh Mason

The author is secretary of the education policy panel of the Association of Polytechnic Teachers.

Dr Hugh Mason

The author is secretary of the education policy panel of the Association of Polytechnic Teachers.